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1983 SURVEY OF THE ELECTRONIC FUNDS TRANSFER TRANSACTION SYSTEM

by

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1983 SURVEY OF THE ELECTRONIC FUNDS TRANSFER TRANSACTION SYSTEM

During the past several years the retail paymehts system has grown at an accelerated pace. Improved technology, deregulation, and a changing environment have contributed to this growth.

Despite several setbacks experienced in the 1970s, there has been a renewed interest in point-of-sale. More than 20,000 various point-of-sale terminals are in use throughout the United States, and more than 60 financial institutions are now involved in a home banking test or a commercial service. Approximately 400 financial institutions now offer a telephone bill payment service.

This study, the sixth in a series of Bank Administration Institute annual surveys on EFT transactions, concentrates on two EFT services that continue to succeed: automated clearing house (ACH) and automated teller machines (ATM). The report analyzes growth, usage patterns, and transaction mix so that financial institutions can measure their own program experience and compare it with other financial institutions.

Background

Bank Administration Institute has been a leader in payments systems research for several years by conducting studies of both the check collection system and the emerging technology for the electronic transfer of funds. To consolidate research in the payments system, the BAI Check Collection Performance Measurement Survey was expanded in 1978 to begin tracking electronic and paper transactions. This is the sixth year EFT data have been accumulated. The 1978 data were published in the form of a research survey. The 1979 data were published separately from the Check Collection Survey, in a format that subsequent reports followed closely. The EFT Survey, which has been conducted by BAI since 1978, is a one-week survey of the EFT activity of major banks. This year the survey was mailed to 201 banks with assets over $250 million.

Survey Respondents

In 1983, a total of 107 banks participated in the BAI EFT Survey by collecting data on both paper and electronic funds transfer transactions during the week of November 14-20. These data provide a one-week "snapshot" that allows performance comparisons with surveys conducted during similar periods in 1980, 1981, and 1982.

The results were obtained by analyzing the data supplied by the 100 banks that answered the questions on ACH transactions and by the 99 banks that answered the questions on ATM transactions. All the participating banks had assets of more than $250 million.

Several respondents could not answer every survey question because of constraints inherent in the internal systems in their banks. Consequently, only those banks that furnished valid answers to all questions pertaining to a given formula were included in the tabulations, which accounts for the varying number of respondents

shown in the different tables. The formulas used for tabulating the results are provided to assist bankers in replicating the survey within their own banks for purposes of comparison.

Although the identities of reporting banks remain confidential, banks can use the data to compare their performance within a given market. A map in Appendix B defines the boundaries of the 16 geographic areas used in developing this report. An accompanying table shows the number of survey respondents from each area.

Survey Highlights

- ACH Transactions Sent — Average percentage of debits decreased from 73.1% in 1982 to 56.5% in 1983.

- ACH Transactions Received — The average percentage of debits received decreased (for the first time) from 66.6% in 1982 to 57.4% in 1983.

- ACH Return Items — For the fourth consecutive year, the number of debits returned was higher than credits returned.

- ACH Debit Types — Insurance premiums were reported as the largest percentage of ACH debits sent (40.4%). "Other" payments were the largest percentage of ACH debits received (47.8%).

- ATM Transaction Mix — Cash withdrawals from checking remains the most frequently used proprietary ATM transaction (51.0%).

- Dollar Value of Proprietary ATM Transactions — The average cash withdrawal from checking was $43, a 4.9% increase from 1982. Cash withdrawals from savings decreased from $63 in 1982 to $57 in 1983.

- Dollar Value of Interchange ATM Transactions — For the second year, the average cash withdrawal from checking was $43. Cash withdrawals from savings decreased from $51 in 1982 to $44 in 1983.

- Weekly Proprietary ATM Transactions per ATM Unit — Higher transaction volumes were experienced in all types of transaction categories, with the exception of cash withdrawals from credit cards. The average number of transactions per week increased 33.1% to 1,276.

- On-line ATM Operations — For the first time, the average percentage of on-line ATM units decreased from 94.2% in 1982 to 93.0% in 1983.

- ATM Service Charge — During the 1983 survey period 40.4% of the banks reported charging customers for using the ATM.

ACH FINDINGS

As of November 1983, 31 ACHs were operating throughout the United States. ACH volume continued to grow throughout 1983. During the survey period, total monthly volume reached 43,565,186 transactions, an increase of 28% over the total monthly volume of the previous year.

For the first time, ACH private volume surpassed ACH government volume as evidenced by 23,725,777 private sector transactions, which accounted for 54.3% of total ACH transactions, a 12% increase over the same period last year. This trend is expected to continue, partly due to the initiation of corporate trade payments.

Financial institutions recognize the need to differentiate their electronic funds transfer products from their competitors. To reduce costs and improve efficiency, several local ACH associations are considering private sector ACH processing as an alternative to the Federal Reserve.

Because most government credits are initiated within the first few days of each month (predominantly Social Security payments), the findings from the mid-November survey are primarily private sector debits and credits. Since the survey is not all-inclusive but limited to a sample of commercial banks, the volume of ACH transactions recorded by survey participants is statistically insignificant. However, when the data are represented as percentages, trends relating to transaction types and point of origin and destination can be observed.

ACH Transactions Sent

The percentage of ACH debits and credits sent by area is shown in Table 1. The average percentage of debits decreased dramatically from 73.1% in 1982 to 56.5% in 1983. In contrast, the percentage of credits increased from 26.9% in 1982 to 43.5% in 1983. Four geographic areas in the study, as opposed to ten areas in 1982, reported sending more credits than debits. They included Boston (59.0% vs. 41.0%), New York (53.6% vs. 46.4%), Philadelphia (78.0% vs. 22.0%), and Washington, D.C. (59.7% vs. 40.3%). The median was 56.5% for debits sent and 43.5% for credits sent.

Table 1
Percent of ACH Debits and Credits Sent by Area

Area	Percent Debits+				Percent Credits±			
	1980	1981	1982	1983	1980	1981	1982	1983
Boston	10.9%	21.2%	19.8%	41.0%	89.1%	78.8%	80.2%	59.0%
New York	29.2	14.5	20.8	46.4	70.8	85.5	79.2	53.6
Philadelphia	9.7	14.7	27.1	22.0	90.3	85.3	72.9	78.0
Pittsburgh	31.7	28.0	36.1	75.2	68.3	62.0	63.9	24.8
Washington, D.C.	20.3	50.2	33.1	40.3	79.7	49.8	66.9	59.7
Atlanta	37.0	51.3	50.9	81.4	63.0	48.7	49.1	18.6
Chicago	19.7	24.8	23.0	51.6	80.3	75.2	77.0	48.4
Cleveland	33.4	43.3	47.6	57.9	66.6	56.7	52.4	42.1
Detroit	32.7	59.3	52.9	50.0	67.3	40.7	47.1	50.0
Minneapolis/St. Paul	*	30.5	45.1	60.1	*	69.5	54.9	39.9
St. Louis	43.3	48.7	55.7	52.5	56.7	51.3	44.3	47.5
Dallas	46.6	49.6	86.8	64.0	53.4	50.4	13.2	36.0
Houston	58.1	65.1	61.9	72.5	41.9	34.9	38.1	27.5
Los Angeles	47.2	21.0	31.1	53.4	52.8	79.0	68.9	46.6
San Francisco	49.4	46.2	48.5	63.0	50.6	53.8	51.5	37.0
Denver	57.5	62.6	55.7	68.6	42.5	37.4	44.3	31.4
Average	66.1%	69.5%	73.1%	56.5%	33.9%	30.5%	26.9%	43.5%
Median	13.7%	33.4%	37.7%	37.4%	86.3%	66.6%	62.3%	64.0%

*No respondents; $\frac{+Q1}{Q5} \times 100$; $\frac{\pm Q3}{Q5} \times 100$.

ACH Transactions Received

Table 2 shows the percentage of ACH debits and credits received by geographic area. For the fourth consecutive year, the percentage of debits received is greater than the percentage of credits received. Three areas reported receiving more credits than debits: Washington, D.C. (51.6% vs. 48.4%), Cleveland (51.0% vs. 49.0%), and San Francisco (51.4% vs. 48.6%). The average percentage of debits decreased (for the first time) to 57.4%, while the percentage of credits rose to 42.6%, the highest average since 1980. The median was 58.8% for debits and 41.4% for credits received.

Table 2
Percent of ACH Debits and Credits Received by Area

Area	Percent Debits+				Percent Credits±			
	1980	1981	1982	1983	1980	1981	1982	1983
Boston	57.7%	59.1%	51.9%	54.1%	42.3%	40.9%	48.1%	45.9%
New York	76.2	54.5	66.6	52.6	23.8	45.5	33.4	47.4
Philadelphia	75.9	62.2	65.6	51.5	24.1	37.8	34.4	48.5
Pittsburgh	80.3	67.4	67.0	60.6	19.7	32.6	33.0	39.4
Washington, D.C.	53.4	47.2	61.0	48.4	46.6	52.8	39.0	51.6
Atlanta	68.0	71.2	68.9	59.4	32.0	28.8	31.1	40.6
Chicago	59.7	51.1	57.2	57.8	40.3	48.9	42.8	42.2
Cleveland	57.5	52.3	66.8	49.0	42.5	47.7	33.2	51.0
Detroit	72.6	60.4	61.9	74.4	27.4	39.6	38.1	25.6
Minneapolis/St. Paul	*	52.6	61.5	58.5	*	47.4	38.5	41.5
St. Louis	63.3	69.0	62.2	58.8	36.7	31.0	37.8	41.2
Dallas	68.5	72.1	66.2	66.8	31.5	27.9	33.8	33.2
Houston	79.0	83.5	66.4	56.5	21.0	16.5	33.6	43.5
Los Angeles	54.1	69.7	59.4	52.9	45.9	30.3	40.6	47.1
San Francisco	70.4	72.0	53.6	48.6	29.6	28.0	46.4	51.4
Denver	57.5	71.3	66.9	77.5	42.5	28.7	33.1	22.5
Average	58.5%	62.2%	66.6%	57.4%	41.5%	37.8%	33.4%	42.6%
Median	72.9%	64.7%	67.6%	58.8%	27.1%	35.3%	32.4%	41.4%

*No respondents; $\frac{+Q2}{Q5} \times 100$; $\frac{\pm Q4}{Q6} \times 100$.

Sent Versus Received

Table 3 shows the percentage of ACH items sent versus received by geographic area for debits, credits, and total ACH volume. Overall, the ACH average percentages of items received were higher than items sent. New York, Pittsburgh, Atlanta, Chicago, Cleveland, and St. Louis reported sending more debits than were received. Six areas also reported sending more credits than were received: Boston (61.4% vs. 38.6%), New York (62.5% vs. 37.5%), Philadelphia (71.5% vs. 28.5%), Washington, D.C. (54.6% vs. 45.4%), Chicago (65.3% vs. 34.7%), and St. Louis (57.5% vs. 42.5%). For the first time since 1980, the average percentage of total ACH items received was higher than the average percentage of items sent.

Table 3
Percent of ACH Items Sent Versus Received by Area

Area	Percent of Debits† Sent 1980	1981	1982	1983	Received 1980	1981	1982	1983
Boston	19.4%	31.9%	14.5%	48.3%	80.6%	68.1%	85.5%	51.7%
New York	12.5	13.0	17.8	56.6	87.5	87.0	82.2	43.4
Philadelphia	4.1	11.1	13.0	40.0	95.9	88.9	87.0	60.0
Pittsburgh	27.6	24.6	15.2	56.1	72.4	75.4	84.8	43.9
Washington, D.C.	14.5	28.7	22.6	46.5	85.5	71.3	77.4	53.5
Atlanta	15.5	26.9	22.2	60.5	84.5	73.1	77.8	39.5
Chicago	22.2	30.4	33.3	59.5	77.8	69.6	66.7	40.5
Cleveland	36.0	38.3	37.0	50.8	64.0	61.7	63.0	49.2
Detroit	19.0	13.5	17.7	15.8	81.0	86.5	82.3	84.2
Minneapolis/St. Paul	*	23.6	35.2	49.0	*	76.4	64.8	51.0
St. Louis	27.1	36.5	29.9	51.1	72.9	63.5	70.1	48.9
Dallas	21.6	17.5	30.4	34.7	78.4	82.5	69.6	65.3
Houston	31.2	25.7	18.4	27.0	68.8	74.3	81.6	73.0
Los Angeles	9.8	3.7	12.9	44.5	90.2	96.3	87.1	55.5
San Francisco	13.1	19.6	11.7	32.2	86.9	80.4	88.3	67.8
Denver	13.1	19.7	26.7	20.8	86.9	80.3	73.3	79.2
Average	52.6%	56.3%	56.9%	47.8%	47.4%	43.7%	43.1%	52.2%
Median	0.1%	7.3%	8.2%	17.6%	99.9%	92.7%	91.8%	83.0%

*No respondents; $\frac{+ Q1/Q2}{Q1 + Q2} \times 100$; $\frac{\pm Q3/Q4}{Q3 + Q4} \times 100$; $\frac{\S\ Q5/Q6}{Q5 + Q6} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 3 on the following page.

Table 3 (Continued)

Percent of Credits‡

Area	Sent 1980	Sent 1981	Sent 1982	Sent 1983	Received 1980	Received 1981	Received 1982	Received 1983
Boston	53.9%	73.2%	47.4%	61.4%	46.1%	26.8%	52.6%	38.6%
New York	24.5	39.0	41.0	62.5	75.5	61.0	59.0	37.5
Philadelphia	24.2	26.3	40.9	71.5	75.8	73.7	59.1	28.5
Pittsburgh	44.3	34.6	21.2	39.3	55.7	65.4	78.8	60.7
Washington, D.C.	47.9	30.1	34.3	54.6	52.1	69.9	65.7	45.4
Atlanta	32.2	30.5	27.9	34.0	67.8	69.5	72.1	66.0
Chicago	48.6	43.5	57.0	65.3	51.4	56.5	43.0	34.7
Cleveland	60.8	42.6	49.7	41.9	39.2	57.4	50.3	58.1
Detroit	43.3	14.4	11.5	35.3	56.7	85.6	88.5	64.7
Minneapolis/St. Paul	*	51.8	44.4	47.3	*	48.2	55.6	52.7
St. Louis	49.2	41.4	41.2	57.5	50.8	58.6	58.8	42.5
Dallas	39.5	34.5	15.0	37.4	60.5	65.5	85.0	62.6
Houston	30.8	25.7	6.4	15.4	69.2	74.3	93.6	84.6
Los Angeles	15.5	15.0	21.1	44.0	84.5	85.0	78.9	56.0
San Francisco	14.7	24.8	16.5	20.8	85.3	75.2	83.5	79.2
Denver	19.7	20.9	31.4	29.3	80.3	79.1	68.6	70.7
Average	44.6%	48.2%	48.6%	48.8%	55.4%	51.8%	51.4%	51.2%
Median	30.0%	28.4%	25.3%	31.4%	70.0%	71.6%	74.7%	69.2%

Total ACH Item§

Area	Sent 1980	Sent 1981	Sent 1982	Sent 1983	Received 1980	Received 1981	Received 1982	Received 1983
Boston	42.8%	66.0%	37.5%	55.2%	57.2%	34.0%	62.5%	44.8%
New York	21.7	26.5	35.0	59.6	78.3	73.5	65.0	40.4
Philadelphia	14.2	19.0	29.5	61.0	85.8	81.0	70.5	39.0
Pittsburgh	36.0	28.2	17.3	50.7	64.0	71.8	82.7	49.3
Washington, D.C.	37.4	33.5	29.3	51.0	62.6	66.5	70.7	49.0
Atlanta	23.9	31.1	26.3	52.8	76.1	68.9	73.7	47.2
Chicago	45.5	42.8	53.0	62.1	54.5	57.2	47.0	37.9
Cleveland	57.0	43.6	46.6	46.6	43.0	56.4	53.4	53.4
Detroit	28.4	14.6	15.0	21.8	71.6	85.4	85.0	78.2
Minneapolis/St. Paul	*	41.6	39.6	48.3	*	58.4	60.4	51.7
St. Louis	46.8	41.0	43.6	53.9	53.2	59.0	56.4	46.1
Dallas	33.0	22.6	25.0	35.6	67.0	77.4	75.0	64.4
Houston	32.7	27.3	15.1	22.4	67.3	72.7	84.9	77.6
Los Angeles	13.1	10.6	21.7	44.3	86.9	89.4	78.3	55.7
San Francisco	14.8	21.1	19.9	26.8	85.2	78.9	80.1	73.2
Denver	16.5	19.2	27.9	22.9	83.5	80.8	72.1	77.1
Average	49.6%	53.5%	54.4%	48.2%	50.4%	46.5%	45.6%	51.8%
Median	20.7%	21.3%	26.2%	30.8%	79.3%	78.7%	73.8%	69.2%

ACH Transactions Returned

Table 4 shows the percentage of ACH return items sent by each area. Even though the average percentage of both debits and credits decreased, the number of debits remained higher than credits for the fourth consecutive year. All the individual areas, except Pittsburgh, reported the percentage of debits exceeded the percentage of credits. The median percentage for debits is 2.1% and 0.1% for credits.

The percentage of ACH items returned of items received by area is shown in Table 5. For the fourth successive year, the average percentage of debits exceeded the average number of credits. Detroit is the only area where credits surpassed debits (0.5% vs. 0.2%). The median percentage for debits is 1.1% and 0.2% for credits.

Table 4

Percent of ACH Items Returned of Items Sent by Area

Area	Percent Debits+				Percent Credits±				Percent Total§			
	1980	1981	1982	1983	1980	1981	1982	1983	1980	1981	1982	1983
Boston	3.0%	8.5%	21.5%	0.4%	0.0%	0.1%	0.2%	0.2%	1.7%	3.1%	2.7%	0.2%
New York	8.9	4.1	27.0	0.7	0.0	2.6	1.1	0.1	5.9	18.2	22.6	0.6
Philadelphia	1.4	5.9	7.9	2.5	10.0	8.5	0.7	0.3	24.3	22.4	4.5	0.8
Pittsburgh	0.8	1.0	15.5	0.4	1.6	1.3	0.6	0.6	6.8	4.9	5.1	0.4
Washington, D.C.	12.3	35.5	18.0	1.3	0.1	0.4	1.0	0.2	1.7	4.4	8.8	0.6
Atlanta	57.8	15.8	8.8	0.6	0.5	0.8	1.0	0.3	5.5	5.3	7.4	0.5
Chicago	1.2	1.5	5.0	0.2	0.6	0.7	0.4	0.2	3.0	13.7	1.3	0.2
Cleveland	68.7	21.0	7.6	0.8	0.3	0.2	0.6	0.2	0.9	3.8	2.3	0.5
Detroit	26.8	3.5	2.2	5.2	3.6	0.0	16.9	0.4	9.6	3.0	2.2	3.3
Minneapolis/St. Paul	*	0.5	0.1	0.0	*	0.0	0.0	0.0	*	1.0	0.0	0.0
St. Louis	37.0	3.2	8.0	0.6	0.2	0.4	0.5	0.1	0.8	1.0	1.8	0.4
Dallas	0.5	1.4	6.7	0.5	1.3	0.1	3.1	0.3	1.1	2.0	5.9	0.4
Houston	0.7	3.6	57.0	0.3	16.9	8.2	0.1	0.2	1.1	3.9	6.7	0.3
Los Angeles	29.9	16.6	23.1	1.8	1.5	0.2	6.2	0.5	14.3	3.9	3.7	1.3
San Francisco	53.2	14.7	74.1	3.0	13.0	6.6	10.6	1.0	13.7	21.8	35.0	2.3
Denver	0.5	1.5	2.7	0.7	1.4	0.5	0.7	0.1	0.7	0.7	0.6	0.5
Average	0.5%	1.3%	4.9%	0.8%	0.2%	0.2%	0.3%	0.2%	0.6%	0.9%	0.5%	0.6%
Median	1.7%	1.7%	2.7%	2.1%	0.0%	0.1%	0.1%	0.1%	1.5%	1.0%	1.2%	0.9%

*No respondents; $+\frac{Q7}{Q1} \times 100$; $\pm\frac{Q9}{Q3} \times 100$; § $\frac{Q11}{Q5} \times 100$.

Table 5
Percent of ACH Items Returned of Items Received by Area

Area	Percent Debits+				Percent Credits±				Percent Total§			
	1980	1981	1982	1983	1980	1981	1982	1983	1980	1981	1982	1983
Boston	1.1%	1.4%	0.3%	0.4%	1.6%	1.9%	0.3%	0.3%	1.1%	1.7%	0.2%	0.3%
New York	1.1	0.5	0.7	1.2	2.2	0.4	1.5	0.3	1.1	0.4	0.8	0.8
Philadelphia	0.4	0.4	0.6	0.9	0.6	0.3	1.0	0.2	0.4	0.3	0.8	0.6
Pittsburgh	0.3	0.3	0.3	0.8	0.2	0.2	0.0	0.3	0.3	0.2	0.2	0.6
Washington, D.C.	0.4	0.8	1.3	0.9	0.2	0.3	0.2	0.2	0.3	0.5	0.8	0.5
Atlanta	1.1	1.4	1.5	2.7	0.1	0.8	0.3	0.1	0.6	1.2	1.0	1.7
Chicago	1.3	2.6	2.3	1.9	2.4	0.9	2.0	0.7	1.3	1.7	2.0	1.4
Cleveland	0.2	0.7	0.6	1.6	0.4	0.2	0.5	0.2	0.3	0.4	0.5	0.8
Detroit	0.4	0.3	0.3	0.2	0.4	0.1	0.1	0.5	0.4	0.4	0.2	0.3
Minneapolis/St. Paul	*	0.6	0.4	0.9	*	0.2	0.2	0.1	*	0.4	0.3	0.6
St. Louis	2.6	0.9	1.4	0.9	0.3	0.1	2.1	0.6	2.3	0.7	1.3	0.8
Dallas	0.7	0.3	3.8	0.3	1.6	0.2	0.1	0.1	0.8	0.3	1.3	0.3
Houston	0.3	0.2	0.2	0.1	3.6	0.6	0.0	0.0	0.6	0.3	0.1	0.1
Los Angeles	4.3	0.9	0.6	1.1	0.3	0.1	0.1	0.3	1.1	0.6	0.4	0.7
San Francisco	0.8	0.6	0.8	0.6	0.1	0.8	0.2	0.1	0.5	0.6	0.5	0.3
Denver	0.5	1.0	1.0	0.7	0.1	0.6	0.6	0.1	0.3	0.8	0.8	0.5
Average	0.5%	0.7%	0.7%	1.1%	0.2%	0.3%	0.4%	0.2%	0.4%	0.5%	0.5%	0.7%
Median	0.0%	0.1%	0.2%	0.3%	0.0%	0.1%	0.1%	0.0%	0.2%	0.2%	0.2%	0.2%

*No respondents; $^{+}\frac{Q8}{Q2} \times 100$; $^{\pm}\frac{Q10}{Q4} \times 100$; $^{\S}\frac{Q12}{Q6} \times 100$.

ACH Debit Types

Even though insurance premiums constituted the largest percentage of ACH debit transactions sent (Table 6), the number sharply declined from 78.3% in 1982 to 40.4% in 1983. During the 1983 survey period, corporate payments rose to 32.1% compared to 11.8% in 1982. All the remaining categories reported an increase from last year's survey period: home mortgages (0.3% to 3.1%), telephone bill payments (0.4% to 1.0%), and "other" payments (9.2% to 23.4%). Because of the difficulty in classifying debits sent, the "other" category accounted for 23.4% of debits sent.

Table 6
Percent of ACH Debit Transactions Sent by Type of Transaction by Area

	Insurance Premium+				Home Mortgage±			
Area	1980	1981	1982	1983	1980	1981	1982	1983
Boston	0.0%	0.0%	0.0%	2.1%	10.8%	0.0%	0.0%	0.5%
New York	49.8	32.8	13.2	45.0	0.0	0.1	0.0	0.0
Philadelphia	*	0.0	0.0	5.7	*	0.0	0.0	0.0
Pittsburgh	*	0.0	0.0	0.8	*	0.0	0.0	0.0
Washington, D.C.	18.3	27.7	11.5	68.0	25.2	21.6	2.8	3.9
Atlanta	5.8	10.0	15.2	66.7	12.3	0.2	6.9	5.9
Chicago	0.0	0.0	2.1	36.5	1.5	0.0	0.0	0.0
Cleveland	19.2	11.3	28.7	10.4	1.4	1.0	0.1	1.9
Detroit	14.7	20.7	0.0	0.0	0.2	0.3	0.1	0.5
Minneapolis/St. Paul	*	0.0	25.9	74.6	*	0.0	1.0	7.1
St. Louis	13.6	0.0	11.4	35.6	4.8	6.1	3.2	9.7
Dallas	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.2
Houston	0.0	33.3	1.2	0.0	25.0	19.6	10.0	0.0
Los Angeles	*	4.4	16.4	84.5	*	0.4	6.8	0.0
San Francisco	19.1	23.4	22.9	58.8	30.9	0.5	0.5	4.2
Denver	6.4	2.6	10.7	73.3	26.9	20.9	12.9	4.9
Average	77.8%	73.7%	78.3%	40.4%	1.7%	1.2%	0.3%	3.1%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

*No respondents; $^{+}\frac{Q13}{Q23} \times 100$; $^{\pm}\frac{Q15}{Q23} \times 100$; $^{\S}\frac{Q17}{Q23} \times 100$; $^{\text{II}}\frac{Q19}{Q23} \times 100$; $^{\#}\frac{Q21}{Q23} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 6 on the following page.

Table 6 (Continued)

Area	Telephone Bill Payment§ 1980	1981	1982	1983	Corporate Payment II 1980	1981	1982	1983
Boston	0.0%	0.0%	0.0%	0.7%	32.5	59.2%	69.9%	0.1%
New York	0.0	0.0	0.0	0.0	50.2	33.8	49.7	50.3
Philadelphia	*	1.1	7.5	6.8	*	66.7	38.5	80.6
Pittsburgh	*	0.0	0.0	0.2	*	100.0	49.7	99.0
Washington, D.C.	0.1	0.0	16.7	0.0	3.1	14.3	29.3	27.3
Atlanta	7.1	14.5	4.8	1.7	20.6	55.1	17.2	14.1
Chicago	0.0	0.0	0.0	0.0	64.8	60.7	47.5	60.7
Cleveland	0.0	0.0	0.0	0.0	42.6	69.6	43.3	21.4
Detroit	0.0	0.0	0.0	0.0	28.1	44.9	38.0	61.6
Minneapolis/St. Paul	*	4.4	0.1	0.0	*	65.4	24.7	11.2
St. Louis	14.0	6.7	0.0	0.0	56.2	81.2	52.9	21.8
Dallas	0.0	0.0	0.0	0.3	66.6	50.0	47.4	76.6
Houston	0.0	0.0	0.0	0.0	25.0	47.0	25.5	100.0
Los Angeles	*	0.0	0.0	0.8	*	0.0	13.2	4.5
San Francisco	25.0	0.1	0.0	0.0	0.0	75.0	20.8	28.4
Denver	0.0	0.0	0.0	0.0	33.3	16.6	43.5	8.0
Average	1.0%	0.8%	0.4%	1.0%	8.1%	19.1%	11.8%	32.1%
Median	0.0%	0.0%	0.0%	0.0%	0.3%	59.3%	15.5%	40.9%

Area	Other Payments # 1980	1981	1982	1983
Boston	56.7%	40.8%	30.1%	96.6%
New York	0.0	33.3	37.0	4.7
Philadelphia	*	32.2	54.0	6.9
Pittsburgh	*	0.0	50.3	0.0
Washington, D.C.	53.4	36.3	39.8	0.8
Atlanta	54.2	20.2	55.9	11.6
Chicago	33.7	39.3	50.4	2.8
Cleveland	36.8	18.1	27.8	66.3
Detroit	57.0	34.1	61.9	37.9
Minneapolis/St. Paul	*	30.2	48.4	7.1
St. Louis	11.5	6.0	32.5	32.9
Dallas	33.4	50.0	52.6	16.3
Houston	50.0	0.1	63.2	0.0
Los Angeles	*	95.2	63.6	10.4
San Francisco	25.0	1.0	55.8	8.6
Denver	33.3	60.0	33.0	13.8
Average	11.4%	5.2%	9.2%	23.4%
Median	13.8%	0.4%	36.2%	4.6%

Even though the "other" payments category continues to be the largest percentage of ACH transactions received (47.8%, Table 7), the 1983 average sharply declined from the previous survey period (from 59.1% in 1982 to 47.8% in 1983). In contrast, all of the other categories experienced increases from the previous survey period.

Table 7
Percent of ACH Debit Transactions Received by Type of Transactions by Area

Area	Insurance Premium+				Home Mortgage±			
	1980	1981	1982	1983	1980	1981	1982	1983
Boston	61.8%	53.8%	26.8%	3.1%	0.0%	0.0%	2.4%	0.5%
New York	74.4	82.4	64.6	44.7	0.0	0.5	0.0	0.0
Philadelphia	70.5	61.4	54.7	55.5	0.3	0.1	0.1	0.1
Pittsburgh	44.0	54.0	42.2	62.0	0.0	0.0	0.0	0.0
Washington, D.C.	23.7	58.5	35.8	40.2	5.8	14.1	2.2	5.8
Atlanta	54.6	50.4	37.2	45.9	0.9	7.1	3.7	6.3
Chicago	76.6	68.4	44.5	46.4	4.8	0.0	1.9	2.5
Cleveland	49.9	59.8	44.6	51.1	5.0	4.0	2.2	2.0
Detroit	53.1	42.3	54.7	33.2	0.2	1.0	0.7	0.4
Minneapolis/St. Paul	*	43.7	33.0	37.4	*	0.3	2.2	0.8
St. Louis	34.8	37.9	38.0	21.0	7.0	4.2	3.5	2.6
Dallas	39.4	22.7	50.1	12.1	5.0	4.0	5.4	0.0
Houston	43.2	38.1	30.0	1.2	1.8	0.9	0.9	0.0
Los Angeles	62.1	61.3	50.5	55.6	2.5	2.0	0.4	0.8
San Francisco	41.1	31.6	41.9	48.7	1.0	1.3	2.0	8.3
Denver	8.2	30.0	42.9	7.0	0.4	3.4	2.1	1.2
Average	31.7%	33.6%	28.5%	30.3%	2.2%	3.6%	1.8%	2.5%
Median	62.9%	60.8%	48.2%	46.8%	0.0%	0.1%	0.1%	0.1%

*No respondents; $\frac{+Q14}{Q24} \times 100$; $\frac{\pm Q16}{Q24} \times 100$; $\frac{\S Q18}{Q24} \times 100$; $\| \frac{Q20}{Q24} \times 100$; $\frac{\#Q22}{Q24} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 7 on the following page.

Table 7 (Continued)

Area	Telephone Bill Payment§ 1980	1981	1982	1983	Corporate Payment II 1980	1981	1982	1983
Boston	0.1%	0.0%	5.2%	2.8%	7.7%	14.6%	23.4%	8.0%
New York	0.1	0.1	0.0	0.0	19.8	12.2	17.7	24.8
Philadelphia	0.0	6.1	0.1	0.0	15.2	16.9	24.3	34.2
Pittsburgh	0.0	0.0	0.0	6.5	18.5	45.9	11.9	13.5
Washington, D.C.	2.7	0.0	0.0	0.0	5.5	4.1	11.9	35.0
Atlanta	1.4	1.7	0.7	1.6	11.3	9.6	8.7	15.5
Chicago	3.8	0.7	0.4	1.8	9.6	17.8	14.7	14.3
Cleveland	1.2	0.4	0.1	0.2	21.5	20.3	17.3	23.5
Detroit	0.0	0.0	0.2	0.1	11.5	18.0	21.3	17.8
Minneapolis/St. Paul	*	28.1	7.7	10.2	*	17.6	15.6	15.6
St. Louis	3.2	6.9	0.6	2.6	15.6	17.2	30.1	15.9
Dallas	0.0	0.0	0.0	0.0	6.9	26.8	21.2	2.9
Houston	0.0	5.2	0.0	0.0	4.6	17.1	4.6	70.0
Los Angeles	0.0	0.0	0.0	1.8	25.1	16.1	11.9	14.7
San Francisco	0.2	0.3	1.6	0.4	8.6	39.3	10.2	21.0
Denver	0.0	1.1	0.0	0.0	1.9	3.0	20.7	3.6
Average	4.3%	2.9%	0.7%	1.4%	7.2%	14.4%	10.0%	18.0%
Median	0.0%	0.0%	0.0%	0.0%	8.8%	13.0%	13.9%	18.9%

Area	Other Payments # 1980	1981	1982	1983
Boston	30.4%	31.6%	42.2%	85.6%
New York	5.7	4.7	17.7	30.5
Philadelphia	14.0	15.4	20.9	10.2
Pittsburgh	37.5	0.1	45.9	18.0
Washington, D.C.	62.3	23.3	50.1	19.0
Atlanta	31.7	31.2	49.6	30.7
Chicago	5.2	13.1	38.6	35.0
Cleveland	22.3	15.5	35.8	23.2
Detroit	35.2	38.6	23.1	48.5
Minneapolis/St. Paul	*	10.3	41.4	36.0
St. Louis	39.5	33.9	27.7	57.9
Dallas	48.7	46.6	23.2	85.0
Houston	50.4	38.7	64.5	28.8
Los Angeles	10.4	20.6	37.2	27.1
San Francisco	49.1	27.4	44.3	21.6
Denver	89.5	62.5	34.3	88.2
Average	54.6%	45.5%	59.1%	47.8%
Median	14.2%	12.5%	27.2%	16.2%

During 1983, competition increased because many nonbank organizations began installing their own ATMs. In view of this strong competition, banks started working more closely together and joined or considered joining a local, regional, and/or national network. There are now more than 150 shared ATM networks nationwide. The number of ATMs installed is growing at a rapid pace. At Bank Administration Institute's ATM/6 Conference it was reported that the industry would ship approximately 13,000 ATMs and cash dispensers in 1983, bringing the total installed base to 47,000.

To reflect the increased interest financial institutions have in sharing arrangements, the EFT survey provides information on ATM transaction mix, average dollar variables and transaction volume for both proprietary and interchange transactions. The statistical information of interchange transactions can provide guidelines for comparing their own interchange program experience with that of other financial institutions.

Transaction Mix

The percentages of proprietary ATM transactions indicate minimal changes from 1982 to 1983 (Table 8). For the fourth consecutive year, cash withdrawals from checking are the most frequently used ATM transaction (51.0%). Percentages of cash withdrawals from credit cards, balance inquiries, checking deposits, and "other" ATM transactions increased slightly, while the remaining categories showed a minimal decrease or remained the same. Median numbers also remained consistent with the 1982 figures.

Table 8
Percent of Proprietary ATM Transactions by Type of Area

	Cash Withdrawals from Checking+				Cash Withdrawals from Savings±			
	1980	1981	1982	1983	1980	1981	1982	1983
Boston	61.0%	48.5%	59.8%	50.5%	8.2%	16.6%	9.3%	10.1%
New York	47.5	33.5	41.9	32.8	9.0	9.0	8.9	10.0
Philadelphia	55.1	49.5	45.5	43.1	10.2	12.2	12.3	15.3
Pittsburgh	59.2	52.1	51.5	49.1	9.9	7.5	9.8	7.6
Washington, D.C.	58.9	59.9	50.5	51.0	7.6	4.7	6.9	6.5
Atlanta	51.5	54.8	55.1	56.5	5.4	5.6	6.0	6.8
Chicago	54.6	53.9	56.8	64.3	10.1	8.7	8.0	5.9
Cleveland	50.4	48.1	47.7	41.3	12.2	12.2	12.8	13.6
Detroit	45.0	46.0	44.8	43.1	14.4	14.7	16.3	9.7
Minneapolis/St. Paul	*	77.3	68.9	55.4	*	4.9	6.6	11.2
St. Louis	55.2	52.4	52.0	53.6	7.4	6.3	6.1	4.8
Dallas	49.9	60.2	49.5	59.3	4.5	2.8	2.4	4.6
Houston	60.6	57.8	58.1	56.6	7.8	3.9	4.3	4.9
Los Angeles	50.4	59.0	57.0	58.4	4.9	4.3	5.3	6.7
San Francisco	64.6	60.3	62.8	53.7	9.8	6.8	4.8	4.6
Denver	61.5	59.7	64.5	57.7	3.7	5.4	4.0	6.8
Average	52.2%	45.5%	52.5%	51.0%	8.3%	8.1%	8.0%	7.8%
Median	53.4%	54.2%	52.9%	52.6%	7.5%	6.9%	6.2%	7.0%

*No respondents; $\frac{+Q25}{Q34} \times 100$; $\frac{\pm Q26}{Q34} \times 100$; $\frac{\S Q27}{Q34} \times 100$; $\frac{^{\circ}Q28}{Q34} \times 100$; No comparable data collected; $\frac{\#Q29}{Q34} \times 100$; $\frac{++Q30}{Q34} \times 100$; $\frac{\S\S Q31}{Q34} \times 100$; $\frac{^{\circ\circ}Q32}{Q34} \times 100$; $\frac{\#\#Q33}{Q34} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 8 on the following pages.

Table 8 (Continued)

Area	Cash Withdrawals From Credit Cards§ 1980	1981	1982	1983	Balance Inquiries° 1980	1981	1982	1983
Boston	0.5%	0.2%	0.4%	0.2%	18.1%	21.0%	18.2%	20.6%
New York	4.0	0.5	0.7	0.9	28.8	42.4	34.4	41.8
Philadelphia	1.0	0.8	0.5	1.5	13.3	17.9	20.9	15.3
Pittsburgh	2.0	1.1	1.0	1.2	16.9	23.2	21.9	24.5
Washington, D.C.	1.5	0.9	2.0	1.7	13.7	17.3	27.6	26.7
Atlanta	1.4	0.7	0.8	0.6	22.5	24.0	24.8	22.7
Chicago	1.5	1.0	0.5	0.7	14.2	15.3	12.6	3.8
Cleveland	1.8	1.5	1.4	0.9	17.3	19.3	21.2	25.5
Detroit	9.5	6.6	6.4	0.4	15.9	12.4	15.5	22.5
Minneapolis/St. Paul	*	0.6	0.3	0.6	*	4.9	10.2	20.1
St. Louis	1.3	1.0	0.9	0.9	20.0	22.1	26.7	27.4
Dallas	0.6	0.1	0.1	0.1	30.8	23.9	29.7	26.2
Houston	0.4	0.1	0.1	0.0	18.2	28.5	28.3	32.0
Los Angeles	0.9	0.8	0.8	1.0	19.8	18.6	20.2	20.6
San Francisco	0.5	1.0	0.5	0.4	8.4	15.6	16.9	24.1
Denver	2.8	1.0	1.3	2.2	17.4	18.1	18.5	20.4
Average	1.1%	0.6%	0.7%	0.8%	19.1%	26.5%	23.3%	24.0%
Median	0.7%	0.3%	0.4%	0.3%	18.7%	22.6%	22.9%	22.7%

Area	Transfers # 1980	1981	1982	1983	Checking Deposits++ 1980	1981	1982	1983
Boston	1.6%	1.6%	2.3%	2.1%	8.5%	6.9%	8.8%	12.3%
New York	1.2	2.2	1.7	2.8	7.3	7.0	10.3	8.3
Philadelphia	2.4	2.5	2.3	2.8	13.7	12.7	13.1	15.3
Pittsburgh	1.8	1.4	1.9	1.9	9.0	10.7	11.7	11.3
Washington, D.C.	2.7	1.5	1.6	2.0	11.5	13.7	9.9	9.3
Atlanta	4.6	1.5	1.6	1.6	9.7	8.0	9.1	8.1
Chicago	4.9	2.4	8.6	2.3	10.6	16.1	11.9	18.6
Cleveland	2.6	2.5	2.5	2.7	12.0	10.0	10.4	11.1
Detroit	3.5	2.9	3.0	2.7	8.3	12.2	10.3	14.4
Minneapolis/St. Paul	*	2.9	2.4	3.5	*	7.0	10.6	8.2
St. Louis	3.3	2.2	2.3	1.9	10.4	9.0	9.4	8.3
Dallas	1.8	1.5	0.8	0.9	10.0	10.8	8.6	7.2
Houston	1.2	1.0	1.0	1.0	10.7	8.1	7.1	5.3
Los Angeles	1.5	1.2	1.4	1.6	20.2	14.1	12.8	9.8
San Francisco	2.4	2.0	1.7	1.5	12.8	12.3	12.4	14.9
Denver	1.7	2.7	1.9	1.8	9.9	11.7	9.1	10.3
Average	2.3%	2.2%	2.2%	2.0%	13.6%	10.5%	10.8%	11.2%
Median	2.2%	1.9%	1.8%	1.9%	10.0%	9.6%	10.0%	10.7%

Table 8 (Continued)

	Savings Deposits§§				Bill Payments°°			
	1980	1981	1982	1983	1980**	1981	1982	1983
Boston	1.7%	3.1%	0.9%	2.2%		0.3%	0.1%	0.6%
New York	1.5	1.9	1.9	2.0		0.9	0.9	0.9
Philadelphia	1.7	2.0	2.4	3.4		0.9	0.6	0.5
Pittsburgh	1.0	0.9	1.4	1.0		0.4	0.3	0.4
Washington, D.C.	1.0	0.6	0.6	0.8		1.4	0.7	0.4
Atlanta	1.1	0.5	0.6	0.6		0.2	0.2	0.3
Chicago	1.8	1.6	1.3	1.7		0.4	1.3	2.7
Cleveland	1.8	1.7	1.7	2.5		1.6	1.2	1.6
Detroit	1.6	1.8	2.3	2.1		1.3	1.3	1.1
Minneapolis/St. Paul	*	0.4	0.8	0.9		0.1	0.2	0.1
St. Louis	0.9	0.7	1.7	1.4		0.3	0.3	0.9
Dallas	0.9	0.4	0.3	0.3		0.3	0.4	0.4
Houston	0.8	0.4	0.3	0.2		0.1	0.1	0.0
Los Angeles	0.5	0.8	0.8	0.5		0.5	0.5	0.2
San Francisco	1.1	0.9	0.6	0.7		0.3	0.3	0.1
Denver	0.4	1.2	0.4	0.6		0.0	0.2	0.2
Average	1.4%	1.5%	1.3%	1.3%		0.5%	0.5%	0.5%
Median	0.9%	0.8%	0.8%	0.9%		0.3%	0.3%	0.3%

Area	Other ATM Transactions## 1980	1981	1982	1983
Boston	0.5%	1.6%	0.0%	1.4%
New York	0.6	2.7	0.3	0.5
Philadelphia	2.7	1.4	2.3	2.8
Pittsburgh	0.3	2.5	0.4	3.0
Washington, D.C.	3.1	0.1	0.2	1.6
Atlanta	3.8	4.7	1.6	2.8
Chicago	2.4	0.5	0.4	0.0
Cleveland	2.0	3.1	1.0	0.8
Detroit	1.8	2.0	2.7	4.0
Minneapolis/St. Paul	*	2.0	0.0	0.0
St. Louis	1.4	6.0	0.7	0.8
Dallas	1.6	0.0	8.3	1.0
Houston	0.3	0.0	0.7	0.0
Los Angeles	1.8	0.7	1.3	1.2
San Francisco	0.4	0.8	0.0	0.0
Denver	2.6	0.2	0.0	0.0
Average	2.0%	4.6%	1.3%	1.4%
Median	0.5%	0.0%	0.0%	0.0%

Cash withdrawals from checking remain the highest percentage of ATM interchange transactions (Table 9). Total cash withdrawals consist of 64.1% of interchange transactions, an increase from last year's figures (71.8%). Two areas reported significant decreases in cash withdrawals from checking: Boston (from 100.0% to 68.0%) and Minneapolis/St. Paul (from 97.2% to 59.2%). A large portion of the decrease from the preceding areas shifted to balance inquiries: Boston (from 0.0% in 1982 to 24.4% in 1983) and Minneapolis/St. Paul (from 0.0% in 1982 to 18.0% in 1983). Several banks from these areas indicated they recently joined a network and that customers frequently check their balances at various interchange ATMs to see if the network really works. Balance inquiries, transfers, checking deposits, bill payments, and "other" ATM transactions increased, while the remaining areas experienced a slight decrease from the previous year.

Table 9
Percent of Interchange ATM Transactions by Type by Area

Area	Cash Withdrawals from Checking+		Cash Withdrawals from Savings±		Cash Withdrawals from Credit Cards§	
	1982	1983	1982	1983	1982	1983
Boston	100.0%	68.0%	0.0%	2.4%	0.0%	0.0%
New York	51.0	69.2	6.7	7.7	16.7	0.0
Philadelphia	54.1	49.1	13.2	14.7	1.0	2.1
Pittsburgh	0.0	54.9	0.0	10.1	0.0	0.4
Washington, D.C.	56.5	76.1	7.9	10.3	0.0	0.5
Atlanta	62.2	58.6	8.1	10.5	0.2	0.1
Chicago	65.3	42.0	9.1	9.4	0.6	0.6
Cleveland	54.2	52.0	20.4	21.5	1.1	0.0
Detroit	41.5	45.8	28.2	9.8	0.2	0.1
Minneapolis/St. Paul	97.2	59.2	0.1	10.0	2.0	1.4
St. Louis	79.2	71.6	4.9	5.7	0.1	0.1
Dallas	62.5	51.6	6.6	5.6	0.1	0.1
Houston	66.1	61.1	5.9	4.4	0.0	0.0
Los Angeles	59.6	68.0	12.8	12.4	2.1	0.8
San Francisco	79.3	68.1	6.8	8.0	2.1	0.3
Denver	57.3	56.4	4.9	8.6	4.8	3.3
Average	58.3%	53.8%	12.3%	9.6%	1.2%	0.7%
Median	61.0%	58.4%	4.8%	8.9%	0.0%	0.0%

$\frac{+Q41}{Q50} \times 100$; $\frac{\pm Q42}{Q50} \times 100$; $\frac{\S Q43}{Q50} \times 100$; $\frac{^{\circ}Q44}{Q50} \times 100$; $\frac{\#Q45}{Q50} \times 100$; $\frac{++Q46}{Q50} \times 100$;

$\frac{\S\S Q47}{Q50} \times 100$; $\frac{^{\circ\circ}Q48}{Q50} \times 100$; $\frac{\#\#Q49}{Q50} \times 100$

Note: The preceding footnotes also pertain to the continuation of Table 9 on the following page.

Table 9 (Continued)

Area	Balance Inquiries° 1982	Balance Inquiries° 1983	Transfers # 1982	Transfers # 1983	Checking Deposits++ 1982	Checking Deposits++ 1983
Boston	0.0%	24.4%	0.0%	1.0%	0.0%	3.3%
New York	25.7	23.1	0.0	0.0	0.0	0.0
Philadelphia	13.0	22.6	4.3	1.5	11.9	7.9
Pittsburgh	0.0	24.4	0.0	1.9	0.0	7.4
Washington, D.C.	35.6	13.1	0.0	0.0	0.0	0.0
Atlanta	24.5	25.7	0.5	0.6	4.0	3.8
Chicago	7.1	3.4	1.5	3.2	13.5	10.6
Cleveland	6.8	1.2	2.5	3.4	13.2	18.9
Detroit	7.0	6.2	2.7	2.0	14.1	22.5
Minneapolis/St. Paul	0.0	18.0	0.0	3.1	0.6	7.3
St. Louis	10.0	5.8	1.0	0.9	4.5	15.4
Dallas	21.9	25.9	0.9	1.0	5.4	8.5
Houston	24.3	34.2	0.6	0.3	2.8	0.0
Los Angeles	14.3	15.3	0.8	1.7	9.4	0.4
San Francisco	2.9	2.2	0.7	7.8	12.8	12.7
Denver	21.3	19.9	1.2	1.0	9.7	10.2
Average	15.8%	19.9%	1.3%	1.5%	8.2%	8.6%
Median	11.3%	15.4%	1.0%	0.6%	7.1%	3.9%

Area	Savings Deposits§§ 1982	Savings Deposits§§ 1983	Bill Payments°° 1982	Bill Payments°° 1983	Other ATM Transactions 1982	Other ATM Transactions 1983
Boston	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%
New York	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	1.6	1.5	0.3	0.4	0.5	0.2
Pittsburgh	0.0	0.9	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.4	0.6	0.0	0.1	0.0	0.0
Chicago	1.3	1.8	0.1	0.6	1.6	28.4
Cleveland	1.7	3.0	0.0	0.0	0.0	0.0
Detroit	3.2	1.2	0.3	0.2	6.0	12.2
Minneapolis/St. Paul	0.0	0.8	0.0	0.2	0.0	0.0
St. Louis	0.2	0.5	0.0	0.0	0.1	0.0
Dallas	0.2	0.4	0.0	0.1	2.5	6.8
Houston	0.2	0.0	0.1	0.0	0.0	0.0
Los Angeles	0.9	0.0	0.0	0.0	0.0	1.4
San Francisco	0.0	0.9	1.2	0.0	0.1	0.0
Denver	0.5	0.6	0.2	0.0	0.0	0.0
Average	1.1%	0.8%	0.1%	0.2%	1.8%	4.9%
Median	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%

Dollar Value of ATM Transactions

In comparing the figures from 1982, the average dollar amounts of proprietary ATM transactions increased in every category except cash withdrawals from savings and bill payments (Table 10). The average deposit to a checking account was $399, a slight increase from $397 in 1982. In comparison, the average cash deposit to a savings account was $309, a 2.7% increase from $301 in 1982. The average dollar value of a bill payment transaction declined 19.1% from $188 in 1982 to $152 in 1983. The average cash withdrawal from a checking account was $43, a 4.9% increase from $41 in 1982.

Table 10
Average Dollar Value of Proprietary ATM Transactions by Area

Area	Cash Withdrawals from Checking+				Cash Withdrawals from Savings±			
	1980	1981	1982	1983	1980	1981	1982	1983
Boston	$38	$42	$43	$52	$35	$43	$41	$54
New York	47	55	50	59	45	54	57	59
Philadelphia	42	47	59	61	48	50	60	58
Pittsburgh	37	40	43	47	38	42	44	45
Washington, D.C.	36	43	43	42	45	44	44	50
Atlanta	35	57	35	32	36	52	39	67
Chicago	39	39	47	45	53	52	56	37
Cleveland	35	36	39	32	36	37	35	31
Detroit	43	39	43	53	46	43	47	48
Minneapolis/St. Paul	☆	52	31	0	☆	55	32	0
St. Louis	38	34	38	37	53	43	47	43
Dallas	35	40	46	25	68	49	88	39
Houston	38	39	40	44	38	49	49	53
Los Angeles	40	43	45	45	55	53	52	49
San Francisco	44	46	55	48	41	52	64	51
Denver	29	38	37	24	39	45	41	31
Average	$39	$48	$41	$43	$44	$47	$63	$52
Median	$38	$40	$42	$47	$43	$45	$46	$50

☆No respondents: +Q35/Q25; ±Q36/Q26; §Q37/Q27; °Q38/Q30; #Q39/Q31

☆☆No comparable data collected; ±±Q40/Q32

Note: The preceding footnotes also pertain to the continuation of Table 10 on the following page.

Table 10 (Continued)

Area	Cash Withdrawals from Credit Cards§§ 1980	1981	1982	1983	Checking Deposits° 1980	1981	1982	1983
Boston	$ 39	$ 47	$ 51	$ 55	$348	$322	$335	$206
New York	44	63	59	63	312	329	276	552
Philadelphia	58	51	58	69	329	303	408	489
Pittsburgh	51	47	51	53	283	290	306	353
Washington, D.C.	48	56	57	57	303	366	372	383
Atlanta	91	49	47	108	258	279	359	360
Chicago	43	51	68	53	361	500	545	795
Cleveland	40	40	45	32	272	295	340	252
Detroit	45	38	44	59	311	561	322	365
Minneapolis/St. Paul	*	42	50	0	*	627	358	0
St. Louis	55	62	79	69	299	279	308	302
Dallas	58	61	0	0	358	354	458	120
Houston	56	61	62	0	278	343	321	339
Los Angeles	46	42	54	52	290	334	371	375
San Francisco	51	67	52	53	317	356	370	473
Denver	46	69	63	27	373	392	399	173
Average	$ 58	$ 54	$ 55	$ 63	$281	$362	$397	$399
Median	$ 46	$ 48	$ 52	$ 54	$289	$323	$345	$ 46

Area	Savings Deposits # 1980	1981	1982	1983	1980**	Bill Payment†† 1981	1982	1983
Boston	$229	$248	$232	$211		$257	$169	$109
New York	212	258	218	271		145	172	127
Philadelphia	267	261	259	360		838	440	596
Pittsburgh	244	215	240	233		624	173	175
Washington, D.C.	613	276	326	344		132	113	128
Atlanta	341	283	415	264		153	146	136
Chicago	391	367	424	282		220	181	100
Cleveland	237	234	184	158		109	121	100
Detroit	357	249	253	260		115	159	78
Minneapolis/St. Paul	*	294	168	0		517	230	0
St. Louis	291	233	262	353		109	106	111
Dallas	264	281	170	176		104	119	2
Houston	287	214	223	235		106	140	32
Los Angeles	376	334	350	588		133	197	120
San Francisco	368	329	328	470		171	144	118
Denver	257	445	301	88		*	257	0
Average	$313	$301	$301	$309		$155	$188	$152
Median	$279	$256	$256	$ 50		$137	$142	$ 56

Table 11 shows the average dollar value of interchange ATM transactions by area. The average interchange cash withdrawal from checking is $43, the same as the average proprietary cash withdrawal from checking shown in Table 10. The average interchange cash withdrawal from savings is $44, 15.4% lower than the average proprietary cash withdrawal from savings. The average amount of interchange cash withdrawal from savings decreased from $51 in 1982 to $44 in 1983. Checking deposits increased substantially from the previous survey year ($375 to $709). This increase was due to two banks reporting high dollar values of checking deposits; one located in the San Francisco area and one in the Detroit area. The categories of cash withdrawals, from credit cards, savings deposits, and bill payments decreased from 1982.

Table 11
Average Dollar Value of Interchange ATM Transactions by Area

Area	Cash Withdrawals from Checking†		Cash Withdrawals from Savings±		Cash Withdrawals from Credit Cards§	
	1982	1983	1982	1983	1982	1983
Boston	$40	$47	$ 0	$54	$30	$ 0
New York	46	38	30	18	30	0
Philadelphia	55	50	60	56	48	55
Pittsburgh	0	39	0	39	0	65
Washington, D.C.	38	41	42	49	0	45
Atlanta	30	36	39	21	41	95
Chicago	52	9	53	11	47	7
Cleveland	38	40	36	39	35	0
Detroit	48	64	47	57	78	60
Minneapolis/St. Paul	29	0	29	0	0	0
St. Louis	37	38	39	43	10	36
Dallas	44	38	50	29	69	44
Houston	33	56	40	51	50	0
Los Angeles	39	50	34	54	44	51
San Francisco	58	61	82	57	34	35
Denver	38	33	38	32	46	48
Average	$43	$43	$51	$44	$50	$51
Median	$40	$42	$42	$44	$42	$52

Table 11 (Continued)

Area	Checking Deposits° 1982	Checking Deposits° 1983	Savings Deposits # 1982	Savings Deposits # 1983	Bill Payments++ 1982	Bill Payments++ 1983
Boston	$ 0	$479	$ 0	$285	$ 0	$ 0
New York	0	0	0	0	0	0
Philadelphia	408	372	258	269	83	135
Pittsburgh	0	235	0	199	0	0
Washington, D.C.	0	0	0	0	0	0
Atlanta	395	261	230	150	120	264
Chicago	385	395	258	111	100	61
Cleveland	315	267	227	240	0	204
Detroit	240	1597	224	360	197	153
Minneapolis/St. Paul	354	0	702	0	0	0
St. Louis	408	419	307	176	227	385
Dallas	480	490	394	316	113	158
Houston	330	0	141	0	115	0
Los Angeles	475	856	335	0	0	0
San Francisco	534	1814	0	609	171	0
Denver	387	486	186	365	233	0
Average	$375	$709	$278	$264	$171	$135
Median	$382	$ 37	$237	$ 34	$143	$ 30

$\frac{+Q51}{Q41} \times 100$; $\frac{\pm Q52}{Q42} \times 100$; $\frac{\S Q53}{Q43} \times 100$; $\frac{^{\circ}Q54}{Q46} \times 100$; $\frac{\#Q55}{Q47} \times 100$; $\frac{++Q56}{Q48} \times 100$;

Weekly ATM Transactions

Higher transaction volumes were experienced in all types of transaction categories, with the exception of cash withdrawals from credit cards (Table 12). Average weekly proprietary transaction volume per ATM increased 33.1% from 958.8 in 1982 to 1,276.0 in 1983. Six areas reported a decrease in total ATM transaction volume: Boston (from 1088.3 transactions to 1081.8), Minneapolis/St. Paul (from 999.8 transactions to 887.3), Detroit (from 1,027 transactions to 598.3), Chicago (from 1,013.9 transactions to 587.3), Dallas (from 1,000 transactions to 792.6), and Houston (from 1,000 transactions to 972.6). The category with the largest percentage increase from the previous survey period was transfers, which accelerated from 2.4 average transactions per week in 1982 to 24.8 in 1983.

Table 12
Average Weekly Transactions per Proprietary ATM Unit by Area

Area	Cash Withdrawals from Checking†				Cash Withdrawals from Savings±			
	1980	1981	1982	1983	1980	1981	1982	1983
Boston	369.8	496.9	598.4	546.6	65.7	153.2	93.4	109.1
New York	424.2	465.0	418.8	369.4	85.9	176.1	88.5	114.6
Philadelphia	476.3	576.7	455.4	405.9	119.4	154.8	123.3	137.9
Pittsburgh	759.2	733.7	514.9	518.5	105.8	105.2	98.0	80.7
Washington, D.C.	695.7	467.6	504.8	695.7	92.7	38.6	69.1	89.2
Atlanta	701.6	1,139.7	551.5	834.5	64.2	100.5	60.2	100.7
Chicago	461.3	469.4	568.1	377.5	99.4	97.9	79.8	34.7
Cleveland	466.3	814.5	477.1	607.9	114.7	202.4	128.3	200.1
Detroit	343.4	300.6	488.3	257.5	121.9	82.9	163.3	58.1
Minneapolis/St. Paul	*	546.6	689.5	491.5	*	47.2	66.4	99.3
St. Louis	656.5	1,070.0	519.6	1,454.6	91.5	162.6	61.0	129.2
Dallas	744.4	677.2	495.2	469.7	110.4	37.0	23.5	36.7
Houston	534.3	530.9	580.9	550.2	79.6	38.2	42.9	47.4
Los Angeles	722.9	1,001.7	569.6	834.6	77.8	84.8	53.2	95.3
San Francisco	714.3	762.3	628.0	727.1	110.8	86.3	48.1	61.7
Denver	644.9	1,002.4	644.9	682.7	46.8	119.6	39.9	80.3
Average	658.0	734.9	541.5	654.6	103.4	132.1	77.4	95.8
Median	516.5	587.9	554.1	611.5	70.8	80.8	53.9	69.2

*No respondents; †Q25/Q72; ±Q26/Q72; §Q27/Q72; °Q28/Q72; #Q29/Q72 No comparable data collected; ±±Q30/Q72; §§Q31/Q72; °°Q32/Q72; ##Q33/Q72; ***Q34/Q72.

Note: The preceding foonotes also pertain to the continuation of Table 12 on the following pages.

Table 12 (Continued)

Area	Cash Withdrawals from Credit Cards§§ 1980	1981	1982	1983	Balance Inquiries° 1980	1981	1982	1983
Boston	3.6	2.2	4.4	1.6	150.3	262.8	181.6	222.8
New York	29.6	10.6	6.8	10.7	302.2	625.9	344.1	473.3
Philadelphia	13.9	10.9	4.9	3.1	175.2	241.3	209.2	181.9
Pittsburgh	26.3	17.8	9.8	11.2	313.8	369.7	219.2	259.2
Washington, D.C.	18.3	6.1	19.6	23.6	177.2	153.6	276.4	364.5
Atlanta	14.2	13.1	8.2	9.2	347.5	577.8	247.9	336.2
Chicago	14.9	10.3	4.7	3.8	153.4	203.3	125.7	22.2
Cleveland	14.8	17.6	14.4	12.9	215.3	324.5	212.2	374.7
Detroit	15.4	8.7	63.8	1.8	197.3	124.5	155.3	134.9
Minneapolis/St. Paul	*	6.7	2.8	6.3	*	54.1	101.9	178.2
St. Louis	17.2	14.7	8.6	22.3	285.9	498.0	266.9	743.9
Dallas	6.8	1.9	0.6	0.7	445.5	368.0	297.0	207.5
Houston	0.8	1.1	1.2	0.0	208.1	279.6	282.5	311.7
Los Angeles	14.8	17.7	7.8	14.5	279.6	358.0	201.9	294.1
San Francisco	6.0	11.2	5.3	5.2	106.9	322.3	168.8	326.2
Denver	16.1	11.5	13.3	25.5	256.7	501.1	185.3	241.2
Average	14.2	9.8	11.0	9.5	242.1	462.6	217.2	312.8
Median	6.7	5.4	7.9	4.3	191.1	277.1	216.4	224.0

Area	Transfers # 1980	1981	1982	1983	Checking Deposits++ 1980	1981	1982	1983
Boston	12.3	17.3	23.4	22.8	67.7	89.8	88.3	133.2
New York	11.1	32.8	17.3	31.3	65.8	102.1	103.0	94.9
Philadelphia	27.4	31.0	23.0	30.6	133.1	155.1	131.2	115.8
Pittsburgh	22.4	20.2	19.5	20.1	120.1	137.8	117.0	119.3
Washington, D.C.	32.0	13.7	16.0	27.5	136.2	112.0	98.9	126.3
Atlanta	33.5	32.3	16.5	23.5	113.8	176.8	91.3	119.8
Chicago	45.4	27.0	86.5	13.8	102.7	109.5	119.1	109.3
Cleveland	25.5	34.1	25.2	39.6	117.2	172.6	104.4	163.1
Detroit	38.6	20.5	29.6	16.4	75.0	102.0	103.5	86.3
Minneapolis/St. Paul	*	19.3	24.1	30.7	*	50.3	105.8	72.5
St. Louis	36.4	47.1	23.0	52.7	124.5	200.8	93.7	224.9
Dallas	23.1	20.1	8.3	6.9	155.5	124.4	85.6	56.8
Houston	14.4	9.3	10.0	9.3	106.6	73.2	70.8	51.9
Los Angeles	25.0	23.3	14.2	23.4	264.9	223.7	127.6	139.8
San Francisco	28.2	25.8	17.5	20.9	169.3	162.7	123.6	201.8
Denver	16.9	37.2	19.5	21.3	120.8	239.1	90.9	122.1
Average	29.0	35.2	2.4	24.8	172.2	164.8	103.4	138.8
Median	20.2	19.5	19.8	18.1	111.3	115.1	101.0	113.3

Table 12 (continued)

Area	Savings Deposits§§ 1980	1981	1982	1983	1980**	Bill Payment°° 1981	1982	1983
Boston	13.2	30.5	8.6	24.0		4.1	1.5	6.3
New York	16.0	38.7	19.2	23.2		6.2	8.5	8.0
Philadelphia	21.1	26.4	23.9	28.9		10.0	6.4	5.8
Pittsburgh	11.6	13.1	13.9	10.5		5.4	3.1	4.5
Washington, D.C.	12.2	5.4	6.4	10.3		10.3	7.1	5.9
Atlanta	28.8	10.1	6.4	9.2		5.4	2.5	3.5
Chicago	18.5	16.6	13.5	9.7		3.9	12.6	16.2
Cleveland	19.7	28.0	16.9	36.6		21.9	11.5	24.3
Detroit	14.9	11.3	23.5	12.6		7.6	12.8	6.7
Minneapolis/St. Paul	*	3.5	8.0	8.2		0.6	1.6	0.7
St. Louis	12.0	18.2	16.7	38.4		4.3	3.2	25.1
Dallas	22.4	6.4	3.3	2.4		8.5	3.9	3.8
Houston	8.9	4.4	3.3	1.7		1.4	1.1	0.3
Los Angeles	7.4	16.0	7.8	7.6		10.1	4.8	3.2
San Francisco	14.4	9.9	5.5	9.1		3.8	2.5	1.0
Denver	5.9	36.7	4.3	7.2		*	1.7	2.5
Average	17.6	25.1	11.1	14.9		8.9	4.5	6.2
Median	8.9	9.6	8.9	8.8		4.0	4.1	3.6

Area	Other ATM Transactions## 1980	1981	1982	1983	Total ATM Transactions*** 1980	1981	1982	1983
Boston	3.0	4.3	0.5	15.4	685.6	1,061.0	1,088.3	1,081.8
New York	7.1	88.4	3.4	5.9	941.9	1,545.8	1,009.6	1,131.3
Philadelphia	44.5	23.8	22.6	37.5	1,010.8	1,226.1	845.7	947.4
Pittsburgh	3.9	22.2	4.1	32.0	1,363.1	1,425.1	863.0	1,055.9
Washington, D.C.	39.3	1.1	1.7	21.5	1,203.7	808.4	704.0	1,364.7
Atlanta	54.5	30.1	15.6	41.6	1,358.1	2,085.8	1,000.1	1,478.1
Chicago	23.9	7.4	3.9	0.0	919.4	945.2	1,013.9	587.3
Cleveland	21.5	35.5	9.8	12.3	994.9	1,651.1	999.8	1,471.4
Detroit	17.4	25.3	26.9	23.8	823.8	683.4	1,027.0	598.3
Minneapolis/St. Paul	*	24.5	0.0	0.0	*	752.8	999.8	887.3
St. Louis	16.5	95.1	7.2	21.1	1,240.5	2,110.7	999.9	2,712.2
Dallas	56.7	0.6	82.7	8.2	1,564.9	1,245.0	1,000.0	792.6
Houston	3.0	0.0	7.3	0.0	955.7	938.1	1,000.0	972.6
Los Angeles	20.4	15.8	13.2	16.5	1,412.7	1,751.1	790.4	1,429.1
San Francisco	4.8	18.0	0.4	0.3	1,154.7	1,402.2	999.2	1,353.2
Denver	27.5	6.9	0.1	0.0	1,135.5	1,954.5	999.9	1,182.8
Average	25.5	72.8	12.5	18.7	1,262.1	1,646.1	958.8	1,276.0
Median	5.1	0.0	8.3	0.0	1,040.7	1,138.1	901.5	1,145.3

1983 Total Dollar Value of Proprietary ATM Activity

Transaction Type	Withdrawals	Deposits	Net
Checking	$28,147.80	$55,381.20	$27,233.40
Savings	4,981.60	4,604.10	(377.50)
Credit card	598.50	0.00	(598.50)
Total	$33,727.90	$59,985.30	$26,257.40

Historically, ATMs have been considered as net deposit takers. By multiplying the average dollar amounts by the average transaction volumes for proprietary transactions (Table 10 x Table 12), the dollars deposited to dollars withdrawn ratio can be calculated. In the 1982 study, the dollar deposited to dollar withdrawn was 1.6:1. The dollar deposited to dollar withdrawn ratio increased to 1.8:1 during the 1983 survey period.

Only two categories in Table 13 had an increase in average weekly interchange transactions from the previous survey period. Even though cash withdrawals from checking (53.4) had the highest average weekly interchange transaction volume, the number of transactions declined dramatically from the previous survey period (from 93.9 transactions). The "other" ATM transactions category rose from 2.3 average transactions in 1982 to 4.9 in 1983. This acceleration is due to substantial increases reported in the Chicago and Dallas areas.

Table 14 shows the number of weekly transactions per proprietary ATM categorized by terminal location. All the categories, except one, reported a decrease in the number of weekly transactions per ATM from the previous year. The category reporting a slight increase was the shopping center location (from 649 transactions to 743). The highest transaction volumes reported were main office vestibule (1,016), main office through the wall (736), off-premise university/college (1,440), and shopping center (743). The transaction volumes are slightly different than in Table 12 because of the number of institutions that were unable to report the transaction volume.

Table 13
Average Weekly Interchange Transactions per ATM Unit by Area

Area	Cash Withdrawals Checking†		Cash Withdrawals Savings±		Cash Withdrawals Credit Cards§	
	1982	1983	1982	1983	1982	1983
Boston	118.4	16.4	0.0	0.6	0.0	0.0
New York	0.3	0.0	0.0	0.0	0.0	0.0
Philadelphia	120.3	158.2	44.3	47.5	7.4	6.7
Pittsburgh	0.0	53.4	0.0	9.8	0.0	0.4
Washington, D.C.	15.8	23.9	2.2	3.2	0.0	0.1
Atlanta	32.7	14.5	2.7	2.6	0.2	0.0
Chicago	157.6	112.6	31.5	25.2	2.0	1.5
Cleveland	44.1	5.5	21.5	2.3	1.1	0.0
Detroit	65.5	79.0	58.5	16.9	0.2	0.2
Minneapolis/St. Paul	130.1	586.5	0.2	99.3	1.0	14.3
St. Louis	99.3	67.1	15.7	5.4	0.0	0.1
Dallas	378.2	545.3	25.1	58.9	0.5	1.3
Houston	62.2	78.0	5.4	5.7	0.0	0.0
Los Angeles	173.4	72.3	51.3	13.2	1.0	0.9
San Francisco	159.8	3.7	0.0	0.4	0.7	0.1
Denver	203.0	24.1	12.7	3.7	19.2	1.4
Average	93.9	53.4	19.7	9.5	1.9	0.7
Median	84.1	2.1	5.3	0.0	0.0	0.0

Table 13 (Continued)

Area	Balance Inquiries° 1982	Balance Inquiries° 1983	Transfers # 1982	Transfers # 1983	Checking Deposits++ 1982	Checking Deposits++ 1983
Boston	0.9	5.9	0.0	0.2	0.0	0.8
New York	0.2	0.0	0.0	0.0	0.0	0.0
Philadelphia	40.0	72.5	4.0	4.9	21.9	25.6
Pittsburgh	0.0	23.7	0.0	1.9	0.0	7.2
Washington, D.C.	9.9	4.1	0.0	0.0	0.0	0.0
Atlanta	18.6	6.4	0.5	0.2	3.6	0.9
Chicago	12.9	9.4	2.7	8.6	26.4	28.5
Cleveland	1.7	0.1	2.7	0.4	11.3	2.0
Detroit	2.2	10.7	3.8	3.4	26.4	38.7
Minneapolis/St. Paul	0.0	178.2	0.0	30.7	1.0	72.5
St. Louis	28.2	5.3	0.0	0.9	14.4	14.5
Dallas	186.4	273.6	11.0	10.5	54.9	89.6
Houston	23.4	43.4	0.5	0.4	1.2	0.0
Los Angeles	54.2	16.3	2.9	1.8	24.0	0.4
San Francisco	15.4	0.1	3.9	0.4	31.0	0.7
Denver	63.6	8.5	4.0	0.4	36.9	4.4
Average	19.7	19.7	1.7	1.5	14.2	8.6
Median	5.2	0.0	1.1	0.0	5.1	0.0

+Q41/Q72; ±Q42/Q72; §Q43/Q72; °Q44/Q72; #Q45/Q72; ++Q46/Q72; §§Q47/Q72; °°Q48/Q72; ##Q49/Q72; ***Q50/Q72.

Note: The preceding footnotes also pertain to the continuation of Table 13 on the following page.

Table 13 (Continued)

Area	Savings Deposits§§ 1982	1983	Bill Payment°° 1982	1983	Other ATM Transactions## 1982	1983
Boston	0.0	0.2	0.0	0.0	0.0	0.0
New York	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	3.9	5.0	0.1	1.3	0.6	0.8
Pittsburgh	0.0	0.9	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.4	0.2	0.0	0.0	0.0	0.0
Chicago	3.7	4.9	0.3	1.5	3.1	76.1
Cleveland	1.9	0.3	0.0	0.0	0.0	0.0
Detroit	5.8	2.1	0.6	0.4	0.8	21.0
Minneapolis/St. Paul	0.0	8.2	0.0	0.7	0.0	0.0
St. Louis	0.7	0.4	0.0	0.0	0.3	0.0
Dallas	2.6	4.0	0.2	1.3	17.3	72.1
Houston	0.1	0.0	0.0	0.0	0.0	0.0
Los Angeles	5.7	0.0	0.0	0.0	0.0	1.5
San Francisco	0.0	0.0	0.7	0.0	0.4	0.0
Denver	1.4	0.2	1.2	0.0	0.0	0.0
Average	2.0	0.8	0.1	0.2	2.3	4.9
Median	0.3	0.0	0.0	0.0	0.0	0.0

Area	Total ATM Transactions*** 1982	1983
Boston	118.3	24.1
New York	0.6	0.1
Philadelphia	242.7	322.5
Pittsburgh	0.0	97.4
Washington, D.C.	28.0	31.4
Atlanta	58.7	24.8
Chicago	240.2	268.2
Cleveland	84.2	10.6
Detroit	127.3	172.5
Minneapolis/St. Paul	132.4	990.3
St. Louis	160.8	93.7
Dallas	676.1	1056.6
Houston	92.7	127.6
Los Angeles	312.4	106.4
San Francisco	194.8	5.4
Denver	342.0	42.8
Average	119.5	99.2
Median	120.5	6.2

Table 14
Number of Weekly Proprietary Transactions per ATM Location by Area

Area	Main Office Units							
	Lobby+		Vestibule±		Through the Wall§		Drive-up°	
	1982	1983	1982	1983	1982	1983	1982	1983
Boston	1,595	129	1,664	1,606	3,018	0	0	0
New York	1,007	257	1,120	293	1,413	1,138	0	0
Philadelphia	876	430	1,358	1,690	695	783	0	0
Pittsburgh	0	226	0	0	0	827	0	0
Washington, D.C.	1,258	291	1,101	0	2,410	57	0	0
Atlanta	637	641	1,463	1,702	1,077	750	1,763	400
Chicago	681	767	1,374	0	604	0	0	0
Cleveland	508	170	733	653	688	911	0	0
Detroit	382	345	648	714	953	1,111	752	0
Minneapolis, St. Paul	1,394	0	0	0	370	0	0	0
St. Louis	853	273	1,213	1,062	353	628	0	0
Dallas	496	417	1,484	1,323	1,156	1,013	598	641
Houston	867	375	267	0	1,261	0	1,112	0
Los Angeles	863	815	0	0	1,217	2,420	376	0
San Francisco	0	156	0	3,161	462	251	0	0
Denver	457	199	732	77	968	155	0	832
Average	879	423	1,338	1,016	944	736	725	459
Median	696	211	1,060	716	812	170	675	0

+Q121/Q57; ±Q122/Q58; §Q123/Q59; °Q124/Q60; #Q125/Q61; ++Q126/Q62; ++Q127/Q63; §§Q128/Q64; °°Q129/Q65; ##Q130/Q66; +++Q131/Q67;

±±±Q132/Q68; §§§Q133/Q69; °°°Q134/Q70; ###Q135/Q71; ++++Q136/Q72.

Note: The preceding footnotes also pertain to the continuation of Table 14 on the following pages.

Table 14 (Continued)

Branch Office Units

Area	Lobby#		Vestibule++		Through-the-Wall±±		Drive-up§§	
	1982	1983	1982	1983	1982	1983	1982	1983
Boston	283	28	926	403	975	130	441	98
New York	366	126	887	515	777	1,437	429	1,076
Philadelphia	611	8	654	444	877	833	1,269	453
Pittsburgh	844	352	0	0	1,348	609	0	178
Washington, D.C.	397	698	471	371	700	167	862	109
Atlanta	369	78	696	181	985	1,205	668	349
Chicago	559	298	831	0	537	610	591	148
Cleveland	296	163	996	530	644	550	789	293
Detroit	254	0	718	779	1,462	254	989	213
Minneapolis/St. Paul	1,000	0	317	0	516	0	692	0
St. Louis	322	415	597	1,060	1,083	432	726	897
Dallas	0	0	0	0	0	16	0	0
Houston	368	0	316	0	1,108	0	706	0
Los Angeles	134	85	2,110	0	1,177	494	1,562	0
San Francisco	118	198	0	0	471	205	455	60
Denver	0	362	0	37	602	0	0	0
Average	412	163	681	515	1,069	531	656	247
Median	367	0	807	389	886	100	696	278

Off-Premise Units

	Free Standing°°		University College##		Shopping Center+++		Grocery/ Retail Store±±±	
	1982	1983	1982	1983	1982	1983	1982	1983
Boston	0	582	0	0	1,685	0	0	0
New York	419	675	2,317	2,026	434	564	389	698
Philadelphia	758	1,072	1,486	1,439	1,154	1,544	270	458
Pittsburgh	0	895	0	292	0	0	700	95
Washington, D.C.	525	317	0	0	0	0	0	0
Atlanta	837	474	1,583	2,561	578	1,764	938	694
Chicago	1,276	0	0	0	0	0	826	141
Cleveland	232	0	1,920	0	0	0	244	0
Detroit	130	286	0	0	75	403	876	0
Minneapolis/St. Paul	500	0	0	0	500	0	1,000	0
St. Louis	478	0	424	0	697	0	0	0
Dallas	345	518	0	538	0	345	155	48
Houston	0	0	2,409	0	463	73	0	0
Los Angeles	731	1,943	877	158	467	0	0	0
San Francisco	0	783	1,257	273	284	564	0	0
Denver	786	79	0	0	0	0	126	171
Average	913	540	1,653	1,440	649	743	551	196
Median	600	263	1,274	321	567	0	516	171

Table 14 (Continued)

Off-Premise Units

	Office/Corporate Complex§§§		Hospital°°°		Other###		Total++++	
	1982	1983	1982	1983	1982	1983	1982	1983
Boston	0	7	0	0	0	59	974	284
New York	450	427	648	803	0	0	1,075	642
Philadelphia	508	488	342	660	508	328	842	700
Pittsburgh	373	110	0	159	0	0	1,279	427
Washington, D.C.	567	0	504	0	0	1,812	679	225
Atlanta	726	586	916	942	539	0	993	1,058
Chicago	1,056	170	1,098	0	268	305	736	413
Cleveland	281	476	807	569	530	0	769	498
Detroit	75	144	75	187	0	0	709	395
Minneapolis/St. Paul	72	0	0	0	0	0	435	0
St. Louis	368	0	0	0	0	0	934	541
Dallas	0	0	0	209	108	73	701	510
Houston	438	0	0	0	626	0	940	191
Los Angeles	0	0	130	0	179	0	1,058	657
San Francisco	0	30	0	0	433	0	1,732	200
Denver	0	299	0	0	892	0	589	78
Average	454	183	561	294	413	227	1,289	518
Median	406	99	571	209	349	0	852	344

Overall, the volume of weekly interchange transactions for main office, branch office and off-premise areas decreased from the previous survey period (Table 15). Only two locations reported an increase in transactions from the previous survey period. They include main office drive-up (from 85 transactions to 295) and off-premise shopping center (from 53 transactions to 82). The main office drive-up category was unusually high due to one bank in the Denver area that reported a large number of transactions in this category.

Table 15
Number of Weekly Interchange Transactions per ATM Unit Location by Area

Main Office

	Lobby+		Vestibule±		Through the Wall§		Drive-up°	
	1982	1983	1982	1983	1982	1983	1982	1983
Boston	0	2	306	250	0	0	0	0
New York	0	0.1	2	0	0	0	0	0
Philadelphia	532	426	35	3	1250	730	0	0
Pittsburgh	0	23	0	0	0	214	0	0
Washington, D.C.	0	1	0	0	0	8	0	0
Atlanta	0	0	0	31	18	1	0	8
Chicago	46	63	128	0	168	71	0	0
Cleveland	45	4	93	32	0	0	0	0
Detroit	0	27	0	0	50	270	0	0
Minneapolis/St. Paul	133	0	0	0	91	0	0	0
St. Louis	20	16	16	28	53	20	0	0
Dallas	33	110	139	287	114	297	45	45
Houston	82	58	12	0	35	0	136	0
Los Angeles	194	0	0	0	0	0	243	0
San Francisco	0	0	0	0	71	25	0	0
Denver	83	40	493	45	382	53	0	1151
Average	60	51	153	147	127	95	85	295
Median	41	0	63	0	75	0	90	0

+Q153/Q57; ±Q154/Q58; §Q155/Q59; °Q156/Q60; #Q157/Q61; ++Q158/Q62; ±±Q159/Q63; §§Q160/Q64; °°Q161/Q65; ##Q162/Q66; +++Q163/Q67;

±±±Q164/Q68; §§§Q165/Q69; °°°Q166/Q70; ###Q167/Q71; ++++Q168/Q72

Note: The preceding footnotes also pertain to the continuation of Table 15 on the following pages.

Table 15 (Continued)

Area	Branch Office: Lobby# 1982	Lobby# 1983	Vestibule++ 1982	Vestibule++ 1983	Through the Wall±± 1982	Through the Wall±± 1983	Drive-up§§ 1982	Drive-up§§ 1983
Boston	5	1	98	10	116	28	158	36
New York	0	0	0	0	0	0.3	0	1
Philadelphia	202	1	25	9	195	173	26	202
Pittsburgh	0	9	0	0	0	108	0	30
Washington, D.C.	0	136	0	50	0	11	0	0
Atlanta	0	2	0	0	10	7	6	7
Chicago	101	88	272	0	203	74	0	0
Cleveland	0	0.1	294	62	0	0.4	0	0.5
Detroit	21	0	189	66	546	94	148	37
Minneapolis/St. Paul	0	0	219	0	54	0	152	0
St. Louis	3	10	8	111	40	107	34	26
Dallas	0	0	0	0	0	81	0	0
Houston	0	0	49	0	42	0	50	0
Los Angeles	27	0	0	0	534	0	0	0
San Francisco	0	0	0	0	33	5	7	5
Denver	0	112	0	4	608	0	0	0
Average	26	20	31	22	255	26	42	27
Median	5	0	49	0	44	0	6	0

Area	Off-Premise: Free Standing°° 1982	Free Standing°° 1983	University College## 1982	University College## 1983	Shopping Center+++ 1982	Shopping Center+++ 1983	Grocery/ Retail Store±±± 1982	Grocery/ Retail Store±±± 1983
Boston	0	37	0	0	0	0	0	0
New York	0	0	0	0.1	0	0	0	0
Philadelphia	0	39	0	0	714	0	0	0
Pittsburgh	0	0	0	89	0	0	0	6
Washington, D.C.	0	27	0	0	0	0	0	0
Atlanta	23	24	58	43	1	0.3	0	0
Chicago	581	0	0	0	0	0	229	605
Cleveland	0	0	0	0	0	0	0	0
Detroit	164	469	0	0	0	483	469	0
Minneapolis/St. Paul	0	0	0	0	0	0	0	0
St. Louis	145	0	192	91	497	0	0	0
Dallas	988	747	0	1,904	0	688	399	627
Houston	0	0	119	0	39	30	0	0
Los Angeles	522	0	417	0	0	0	0	0
San Francisco	0	0	5	13	64	20	0	0
Denver	651	55	0	0	0	0	860	125
Average	230	105	83	59	53	82	415	223
Median	338	0	111	0	1	0	292	0

Table 15 (Continued)

Area	Off-Premise Units: Office/Corporate Complex§§§ 1982	1983	Hospital°°° 1982	1983	Other### 1982	1983	Total++++ 1982	1983
Boston	0	10	0	4	0	7	18	16
New York	0	0	0	0	0	0	0	0
Philadelphia	14	169	0	0	0	0	188	123
Pittsburgh	0	4	0	63	0	0	0	70
Washington, D.C.	0	0	0	0	0	32	0	21
Atlanta	0	2	0	0	0	0	13	9
Chicago	80	163	485	0	301	0	165	104
Cleveland	0	0	399	130	0	0	128	10
Detroit	0	149	0	76	0	0	153	58
Minneapolis/St. Paul	0	0	0	0	0	0	62	0
St. Louis	304	0	0	0	0	0	72	87
Dallas	0	0	0	156	771	714	382	447
Houston	0	0	0	0	41	0	70	36
Los Angeles	0	0	0	0	0	0	505	0
San Francisco	0	0	0	0	868	0	1089	5
Denver	0	133	0	0	306	0	269	44
Average	43	38	228	45	184	17	147	40
Median	0	0	392	0	301	0	108	0

Location of ATM Units

Even though branch office locations continue to be the most popular choice for placing ATMs, the total percentage of branch office locations decreased from 83.7% in 1982 to 80.6% in 1983 (Table 16). Consistent with previous studies, the priority of placing ATMs varies from one geographic location to another. For example, the Houston area reported placing 44.4% of its ATM units in the main office lobby while the Washington, D.C. area chose to place only 0.2% of the total ATM units in the main office lobby. The San Francisco region reported 89.4% of all ATM units are located through-the-wall in the branch office, while the Minneapolis/St. Paul and Houston areas reported placing 0.0% ATMs through-the-wall in the branch office.

Regarding the placement of ATMs, the branch office through-the-wall location remains the highest average percentage (59.3%) of all locations. For main office locations, the lobby was the preferred area (2.2%). The free-standing location was the favored off-premise area (3.6%).

Table 16
ATM Units by Area*

Main Office

	Lobby+		Vestibule±		Through the Wall§		Drive-up°	
	1982	1983	1982	1983	1982	1983	1982	1983
Boston	1.5%	3.1%	1.4%	0.7%	15.7%	1.4%	0.0%	0.0%
New York	4.0	3.0	1.7	1.6	3.3	1.1	0.0	0.0
Philadelphia	1.4	1.7	1.7	1.4	1.1	1.1	0.0	0.0
Pittsburgh	4.4	2.1	0.0	0.0	2.2	1.4	0.0	0.0
Washington, D.C.	1.2	0.2	0.2	0.7	1.8	0.7	0.2	0.0
Atlanta	1.3	0.9	1.2	0.4	5.1	4.7	0.1	0.4
Chicago	27.8	28.1	5.8	4.5	9.0	3.4	0.0	1.1
Cleveland	3.4	2.6	3.2	1.2	0.5	0.9	0.0	0.0
Detroit	2.7	1.5	0.7	0.8	0.7	0.4	1.0	0.4
Minneapolis/St. Paul	11.7	16.7	5.0	0.0	16.3	50.0	0.5	0.0
St. Louis	13.2	3.7	4.7	0.7	4.7	6.6	0.0	0.0
Dallas	12.0	4.8	10.2	18.5	15.0	11.3	2.7	5.4
Houston	34.3	44.4	6.3	0.0	1.3	0.0	4.2	11.1
Los Angeles	1.0	1.3	0.2	0.2	1.7	0.9	0.2	0.2
San Francisco	1.1	0.7	0.0	0.1	1.3	0.6	0.0	0.0
Denver	16.3	6.1	10.7	4.9	9.2	4.9	0.0	1.2
Average	2.0%	2.2%	0.8%	1.3%	1.9%	2.1%	0.1%	0.3%
Median	1.5%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

*Due to a change in the format of the 1982 EFTS questionnaire, historical data are not included but can be found in the 1982 Electronic Funds Transfer Survey.

$+\frac{Q57}{Q72} \times 100$; $\pm\frac{Q58}{Q72} \times 100$; $\S\frac{Q59}{Q72} \times 100$; $^{\circ}\frac{Q60}{Q72} \times 100$; $\#\frac{Q61}{Q72} \times 100$;

$++\frac{Q62}{Q72} \times 100$; $\pm\pm\frac{Q63}{Q72} \times 100$; $\S\S\frac{Q64}{Q72} \times 100$; $^{\circ\circ}\frac{Q65}{Q72} \times 100$; $\#\#\frac{Q66}{Q72} \times 100$;

$+++\frac{Q67}{Q72} \times 100$; $\pm\pm\pm\frac{Q68}{Q72} \times 100$; $\S\S\S\frac{Q69}{Q72} \times 100$; $^{\circ\circ\circ}\frac{Q70}{Q72} \times 100$; $\#\#\#\frac{Q71}{Q72} \times 100$.

Note: The preceding footnotes pertain to the continuation of Table 16 on the following pages.

Table 16 (Continued)

Area	Branch Office: Lobby# 1982	Lobby# 1983	Vestibule++ 1982	Vestibule++ 1983	Through the Wall±± 1982	Through the Wall±± 1983	Drive-up§§ 1982	Drive-up§§ 1983
Boston	3.9%	11.0%	32.7%	44.3%	27.5%	30.6%	1.0%	2.5%
New York	10.9	1.6	53.1	70.5	17.8	7.9	1.0	0.7
Philadelphia	1.0	12.7	12.6	12.1	63.1	54.9	3.8	3.1
Pittsburgh	3.3	6.2	0.0	0.0	77.5	56.5	0.0	2.0
Washington, D.C.	5.9	6.9	12.7	4.0	67.2	71.4	4.1	5.0
Atlanta	0.7	2.6	3.7	0.6	65.2	67.6	4.2	3.1
Chicago	8.0	18.0	8.9	2.2	21.8	15.7	1.8	6.7
Cleveland	6.1	5.9	27.2	11.2	47.1	69.4	5.1	3.8
Detroit	11.1	23.3	25.0	40.1	37.7	10.3	3.9	13.2
Minneapolis/St. Paul	2.3	0.0	17.0	33.3	7.3	0.0	2.9	0.0
St. Louis	0.8	6.6	7.7	14.0	55.1	61.8	6.0	4.4
Dallas	0.0	0.6	0.0	0.0	14.8	10.7	0.0	0.0
Houston	0.9	0.0	1.3	0.0	35.1	0.0	4.2	11.1
Los Angeles	4.3	3.0	0.7	2.1	86.0	84.2	0.8	0.9
San Francisco	1.2	2.0	0.3	0.5	87.4	89.4	3.9	2.0
Denver	4.6	2.4	10.8	18.3	23.2	18.3	0.0	0.0
Average	13.7%	5.7%	14.7%	12.5%	53.2%	59.3%	2.1%	3.1%
Median	0.0%	0.5%	0.0%	0.0%	57.0%	57.7%	0.0%	0.0%

Area	Off-Premise: Free Standing°° 1982	Free Standing°° 1983	University College## 1982	University College## 1983	Shopping Center+++ 1982	Shopping Center+++ 1983	Grocery/ Retail Store±±± 1982	Grocery/ Retail Store±±± 1983
Boston	0.5%	1.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.3%
New York	1.1	3.0	3.5	3.8	0.1	2.2	1.0	0.5
Philadelphia	4.0	4.2	0.8	0.6	4.7	3.9	2.1	0.8
Pittsburgh	2.0	1.0	2.1	1.7	0.0	0.0	4.5	19.5
Washington, D.C.	0.5	3.3	0.3	1.0	1.0	0.7	0.2	1.0
Atlanta	12.6	9.9	1.9	2.2	2.5	2.6	0.5	3.3
Chicago	2.6	0.0	0.4	1.1	0.0	0.0	6.5	6.7
Cleveland	0.9	0.9	0.7	0.0	0.5	1.2	0.3	0.0
Detroit	3.1	1.5	0.1	0.0	0.6	0.8	0.8	2.3
Minneapolis/St. Paul	8.0	0.0	0.0	0.0	14.8	0.0	7.0	0.0
St. Louis	1.0	0.0	2.3	1.5	3.5	0.7	0.0	0.0
Dallas	21.0	10.7	0.0	0.6	2.6	6.0	20.9	29.8
Houston	0.0	0.0	1.7	0.0	3.0	33.4	0.0	0.0
Los Angeles	2.1	1.5	1.1	1.1	0.6	3.2	0.0	0.0
San Francisco	0.4	0.2	1.1	0.3	1.2	0.5	0.1	0.0
Denver	14.9	24.4	0.0	2.4	0.0	12.2	2.8	3.7
Average	3.5%	3.6%	1.3%	1.1%	1.8%	1.9%	2.1%	3.1%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 16 (Continued)

Area	Off-Premise Units: Office/Corporate Complex§§§ 1982	Office/Corporate Complex§§§ 1983	Hospital°°° 1982	Hospital°°° 1983	Other### 1982	Other### 1983
Boston	0.0%	3.4%	1.1%	1.4%	14.3%	0.3%
New York	1.0	1.6	1.6	1.4	0.1	1.1
Philadelphia	1.1	2.0	0.1	0.4	2.5	1.1
Pittsburgh	2.3	3.8	1.8	2.7	0.0	3.1
Washington, D.C.	1.2	1.8	0.8	2.1	2.6	1.2
Atlanta	0.8	1.2	0.0	0.1	0.2	0.4
Chicago	3.0	6.9	2.7	0.0	1.7	5.6
Cleveland	0.8	0.9	3.7	2.0	0.5	0.0
Detroit	12.3	3.1	0.3	0.8	0.0	1.5
Minneapolis/St. Paul	5.0	0.0	0.0	0.0	2.0	0.0
St. Louis	1.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.4	0.0	0.6	0.9	0.6
Houston	4.6	0.0	0.0	0.0	3.1	0.0
Los Angeles	0.5	0.6	0.2	0.2	0.8	0.6
San Francisco	1.4	2.3	0.0	0.0	0.7	1.4
Denver	0.0	1.2	0.0	0.0	7.4	0.0
Average	1.3%	2.0%	0.7%	0.8%	0.8%	1.0%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

ATM Installation Plans

Branch office sites remain the most popular choice for new ATM installations (Table 17). Of the 66.6% ATMs to be installed at the branch location, 25.5% were to be installed in the lobby and 24.2% through-the-wall. The percentage of off-premise ATMs to be installed was reported at 31.1%, a decrease from 32.5% reported in 1982. Four off-premise locations indicated a slight increase from the previous survey period: university/college, shopping center, office, and hospital. Consistent with the previous survey period, the percentage of main office ATMs to be installed decreased (from 3.3% in 1982 to 2.3% in 1983). Total ATM installation growth reported during the 1983 survey period decreased to 25.9% in comparison to current installations. The area showing the highest growth in new installations was Houston (166.7%).

Table 17
ATM Unit Installation Plans by Area

Percent of Total ATM Units to Be Installed in Main Office

	Lobby+		Vestibule±		Through the Wall§		Drive-up°	
	1982	1983	1982	1983	1982	1983	1982	1983
Boston	1.9%	0.0%	2.8%	0.0%	0.0%	3.7%	2.8%	0.0%
New York	0.0	2.2	1.2	0.0	0.0	0.0	0.0	0.0
Philadelphia	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0
Washington, D.C.	0.5	4.2	0.1	0.0	0.0	0.0	0.0	0.0
Atlanta	4.0	0.0	0.0	0.0	3.1	1.7	0.0	0.0
Chicago	9.3	0.0	0.0	0.0	3.6	11.1	0.0	3.7
Cleveland	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	14.3	0.0	0.1	0.0	0.0	5.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0
St. Louis	20.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0
Dallas	8.3	0.0	0.0	0.0	8.3	0.0	15.3	0.0
Houston	22.9	26.6	9.8	0.0	0.0	6.7	20.0	0.0
Los Angeles	1.6	0.0	0.0	0.0	0.2	0.0	0.0	0.0
San Francisco	2.1	1.5	0.0	0.0	0.0	1.4	0.0	0.0
Denver	45.8	0.0	0.0	0.0	16.7	0.0	12.5	0.0
Average	1.7%	0.8%	0.4%	0.1%	0.8%	1.3%	0.4%	0.1%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

*Due to a change in the format of the 1982 EFTS questionnaire, historical data are not included but can be found in the 1982 Electronic Funds Transfer Survey.

$+\frac{Q89}{Q104} \times 100$; $\pm\frac{Q90}{Q104} \times 100$; $\S\frac{Q91}{Q104} \times 100$; $^{\circ}\frac{Q92}{Q104} \times 100$; $\#\frac{Q93}{Q104} \times 100$; $++\frac{Q94}{Q104} \times 100$; $\pm\pm\frac{Q95}{Q104} \times 100$;

$\S\S\frac{Q96}{Q104} \times 100$; $^{\circ\circ}\frac{Q97}{Q104} \times 100$; $\#\#\frac{Q98}{Q104} \times 100$; $+++\frac{Q99}{Q104} \times 100$; $\pm\pm\pm\frac{Q100}{Q104} \times 100$; $\S\S\S\frac{Q101}{Q104} \times 100$;

$^{\circ\circ\circ}\frac{Q102}{Q104} \times 100$; $\#\#\#\frac{Q103}{Q104} \times 100$.

Note: The preceding footnote also pertains to the continuation of Table 17 on the following pages.

Table 17 (Continued)

Branch Office

Area	Lobby# 1982	Lobby# 1983	Vestibule++ 1982	Vestibule++ 1983	Through the Wall±± 1982	Through the Wall±± 1983	Drive-up§§ 1982	Drive-up§§ 1983
Boston	23.7%	8.2%	43.1%	45.5%	2.6%	5.2%	3.1%	0.0%
New York	6.6	19.6	46.8	30.4	15.8	14.1	0.0	8.7
Philadelphia	14.3	38.5	3.1	2.1	48.5	29.2	4.1	6.3
Pittsburgh	11.1	39.5	0.0	28.0	55.6	23.3	16.7	2.3
Washington, D.C.	9.9	0.0	9.9	0.0	48.1	47.2	13.2	12.5
Atlanta	9.6	17.7	0.0	0.0	40.3	30.2	7.6	2.7
Chicago	0.0	7.4	0.0	0.0	18.6	18.5	6.7	3.7
Cleveland	9.6	54.0	3.1	5.3	57.9	16.9	4.3	8.8
Detroit	20.6	2.5	7.5	10.0	37.3	12.5	12.7	35.0
Minneapolis/St. Paul	0.0	0.0	5.3	0.0	5.3	0.0	7.8	0.0
St. Louis	8.3	68.4	0.0	1.8	27.5	8.7	11.7	12.2
Dallas	0.0	32.3	0.0	0.0	0.0	6.4	0.0	0.0
Houston	12.9	0.0	2.9	0.0	8.6	0.0	10.9	0.0
Los Angeles	28.4	8.0	6.5	4.0	32.2	45.4	1.7	13.3
San Francisco	26.6	64.7	0.0	0.0	53.3	13.7	3.4	5.0
Denver	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0
Average	21.5%	25.5%	16.7%	9.4%	20.9%	24.2%	5.1%	7.5%
Median	0.0%	0.0%	50.0%	0.0%	7.1%	13.0%	0.0%	0.0%

Off-Premise

Area	Free Standing°° 1982	Free Standing°° 1983	University College## 1982	University College## 1983	Shopping Center+++ 1982	Shopping Center+++ 1983	Grocery/ Retail Store±±± 1982	Grocery/ Retail Store±±± 1983
Boston	10.3%	0.0%	0.8%	0.0%	0.7%	0.0%	0.3%	29.9%
New York	15.7	2.2	2.1	0.0	2.6	2.2	4.2	12.0
Philadelphia	11.3	12.5	0.0	0.0	5.4	1.0	1.9	7.3
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	9.7	23.6	0.0	1.4	0.0	2.8	0.5	1.4
Atlanta	18.0	11.2	1.5	2.6	11.4	4.7	0.0	17.2
Chicago	5.6	3.7	0.0	0.0	0.0	0.0	28.3	33.3
Cleveland	3.2	3.5	0.2	1.8	0.0	0.9	13.8	1.8
Detroit	0.0	0.0	0.0	2.5	0.0	2.5	4.2	7.5
Minneapolis/St. Paul	38.9	0.0	0.0	0.0	0.0	0.0	28.9	0.0
St. Louis	0.0	1.8	0.0	0.0	0.0	0.0	1.7	0.0
Dallas	55.6	3.2	0.0	0.0	0.0	0.0	12.5	38.6
Houston	0.0	0.0	0.0	0.0	12.0	60.0	0.0	0.0
Los Angeles	16.3	0.4	1.8	2.0	5.9	8.4	0.0	2.4
San Francisco	4.6	2.2	0.6	1.4	3.1	7.2	2.9	0.0
Denver	12.5	71.5	0.0	9.5	0.0	0.0	12.5	0.0
Average	9.4%	6.1%	0.9%	1.4%	3.7%	4.3%	11.0%	9.6%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 17 (Continued)

Off-Premise (continued)

Area	Office §§§ 1982	Office §§§ 1983	Hospital°°° 1982	Hospital°°° 1983	Other### 1982	Other### 1983
Boston	1.0%	7.5%	6.9%	0.0%	0.0%	0.0%
New York	2.2	4.3	0.7	0.0	2.1	4.3
Philadelphia	8.6	1.0	0.8	2.1	0.0	0.0
Pittsburgh	11.1	0.0	5.6	2.3	0.0	2.3
Washington, D.C.	1.1	4.2	1.1	1.4	5.9	1.3
Atlanta	1.7	6.0	2.8	1.7	0.0	4.3
Chicago	20.4	7.4	3.3	0.0	4.2	11.2
Cleveland	0.0	3.5	6.4	3.5	1.0	0.0
Detroit	0.9	12.5	0.0	10.0	2.4	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	13.9	0.0
St. Louis	5.8	1.8	0.0	1.8	0.0	3.5
Dallas	0.0	6.5	0.0	6.5	0.0	6.5
Houston	0.0	0.0	0.0	0.0	0.0	6.7
Los Angeles	0.6	0.4	0.7	0.8	4.1	14.9
San Francisco	3.4	2.2	0.0	0.0	0.0	0.7
Denver	0.0	0.0	0.0	0.0	0.0	0.0
Average	1.5%	3.7%	1.1%	1.5%	4.9%	4.5%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Total New ATM

Installation to Current Installation

	1980	1981	1982	1983
Boston	111.5%	38.5%	105.3%	46.0%
New York	38.6	29.9	43.1	19.4
Philadelphia	94.8	32.1	37.6	27.0
Pittsburgh	123.2	28.8	30.1	14.7
Washington, D.C.	37.2	52.7	31.1	17.1
Atlanta	55.1	61.7	37.6	27.1
Chicago	34.9	36.8	45.9	30.3
Cleveland	45.1	37.2	56.3	33.2
Detroit	41.5	90.2	55.6	15.3
Minneapolis/St. Paul	*	39.9	24.8	33.3
St. Louis	18.1	13.8	16.9	41.9
Dallas	423.3	75.2	23.4	18.5
Houston	47.5	58.1	47.0	166.7
Los Angeles	57.5	33.3	58.6	53.3
San Francisco	69.3	55.1	41.1	13.4
Denver	70.2	45.8	52.8	25.6
Average	50.5%	43.7%	43.1%	25.9%
Median	30.0%	24.7%	34.5%	50.0%

On-Line Versus Off-Line

The 1983 survey period was the first time the average percentage of on-line ATM units decreased from the previous survey period (Table 18). The percentage of on-line ATM units decreased from 94.2% in 1982 to 93.0% in 1983. In contrast, the percentage of off-line ATM units increased for the first time, from 5.8% in 1982 to 7.0% in 1983. Philadelphia, Chicago, Houston, San Francisco, and Denver reported an increase in off-line units from 1982 to 1983. Eleven areas, versus 10 areas during the 1982 survey period, reported 100% on-line operations during 1983.

Table 18
On-Line Versus Off-Line ATM Units by Area

	Percent On-Line ATM Units				Percent Off-Line ATM Units			
Area	1980	1981	1982	1983	1980	1981	1982	1983
Boston	75.0%	75.0%	75.0%	100.0%	25.0%	25.0%	25.0%	0.0%
New York	80.0	100.0	100.0	100.0	20.0	0.0	0.0	0.0
Philadelphia	81.8	85.7	91.7	83.3	18.2	14.3	8.3	16.7
Pittsburgh	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
Washington, D.C.	75.0	60.0	100.0	100.0	25.0	40.0	0.0	0.0
Atlanta	84.6	100.0	95.2	100.0	15.4	0.0	4.8	0.0
Chicago	66.7	85.7	77.8	71.4	33.3	14.3	22.2	28.6
Cleveland	100.0	100.0	90.9	100.0	0.0	0.0	9.1	0.0
Detroit	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	*	100.0	100.0	100.0	*	0.0	0.0	0.0
St. Louis	80.0	85.7	100.0	100.0	20.0	14.3	0.0	0.0
Dallas	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
Houston	100.0	100.0	100.0	50.0	0.0	0.0	0.0	50.0
Los Angeles	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
San Francisco	100.0	100.0	88.9	85.7	0.0	0.0	11.1	14.3
Denver	100.0	100.0	100.0	75.0	0.0	0.0	0.0	25.0
Average	87.3%	92.8%	94.2%	93.0%	12.7%	7.2%	5.8%	7.0%

*No respondents.

ATM Service Charges

Pricing is a major concern of bank management. Due to the many changes occurring in the financial industry many banks are taking a closer look at the pricing of services and realizing that ATMs are an important part of a bank's overall pricing strategies. Pricing ATM services is difficult for financial institutions; they want to charge enough to make a profit but realistically they may charge little, if anything, to encourage customer usage. During the past several years financial institutions have started charging customers for withdrawals at human tellers in an effort to move these transactions to the ATMs.

The financial institutions that participated in the survey were asked if they levied a service charge on customers who used the ATM. Table 19 shows 59.6% of the banks do not levy a service charge while 40.4% levy some type of charge.

Table 19
1983 Service Charges by Area

	No	Yes
Boston	100.0%	0.0%
New York	75.0	25.0
Philadelphia	58.3	41.7
Pittsburgh	100.0	0.0
Washington, D.C.	50.0	50.0
Atlanta	38.5	61.5
Chicago	71.4	28.6
Cleveland	50.0	50.0
Detroit	40.0	60.0
Minneapolis/St. Paul	100.0	0.0
St. Louis	66.7	33.3
Dallas	0.0	100.0
Houston	50.0	50.0
Los Angeles	50.0	50.0
San Francisco	57.1	42.9
Denver	100.0	0.0
Average	59.6%	40.4%

Most of the participating banks that levy some type of service fee charge their customers on a per transaction basis (68.8% — Table 20). The "other" category (25.0%) accounted mostly for banks charging customers a fee only if their account balance fell below a set minimum amount.

Table 20

ATM Service Charges — Structure of Types of Fees

	Per Transaction	Flat Fee	Both	Other
Boston	100.0%	0.0%	0.0%	0.0%
New York	100.0	0.0	0.0	0.0
Philadelphia	100.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	100.0
Washington, D.C.	33.3	0.0	0.0	66.7
Atlanta	80.0	10.0	0.0	10.0
Chicago	0.0	0.0	50.0	50.0
Cleveland	75.0	0.0	0.0	25.0
Detroit	66.7	0.0	0.0	33.3
Minneapolis/St. Paul	0.0	0.0	0.0	0.0
St. Louis	100.0	0.0	0.0	0.0
Dallas	50.0	0.0	25.0	25.0
Houston	100.0	0.0	0.0	0.0
Los Angeles	40.0	0.0	0.0	60.0
San Francisco	75.0	0.0	0.0	25.0
Denver	0.0	0.0	0.0	0.0
Average	68.8%	2.0%	4.2%	25.0%

As shown in Table 21, 66.7% of the participants charge the same amount for ATM transactions and DDA paper items. Only 3.9% of the banks (Dallas and Houston areas) charge more for an ATM transaction.

Table 21

1983 Service Charge Comparison
ATM Transactions and DDA Paper Items

	DDA Charge Higher than ATM Charge	DDA Charge Lower than ATM Charge	Same
Boston	0.0%	100.0%	0.0%
New York	0.0	0.0	100.0
Philadelphia	0.0	20.0	80.0
Pittsburgh	0.0	100.0	0.0
Washington, D.C.	0.0	50.0	50.0
Atlanta	0.0	30.0	70.0
Chicago	0.0	33.3	66.7
Cleveland	0.0	40.0	60.0
Detroit	0.0	50.0	50.0
Minneapolis/St. Paul	0.0	0.0	0.0
St. Louis	0.0	33.4	66.6
Dallas	25.0	25.0	50.0
Houston	100.0	0.0	0.0
Los Angeles	0.0	20.0	80.0
San Francisco	0.0	0.0	100.0
Denver	0.0	0.0	0.0
Average	3.9%	29.4%	66.7%

During the past several years many financial institutions have indicated that only 33% of their card-holding customers actively use the ATM and they are unable to move this percentage higher. Table 22 shows the total average percentages of both proprietary and local/regional network card-holding customers actively using the ATM at least once a month are well above 33%. The St. Louis area reported the highest proprietary usage rates (72.0%). The Atlanta region reported a 100% usage rate for the local/regional network card. The average percentage usage rate for proprietary cards was 43.1% and 44.6% for local/regional network cards.

Table 22

Active ATM Access Cards

	Proprietary +	Local/ Regional Network #
Boston	36.0%	0.0%
New York	25.2	0.0
Philadelphia	34.1	40.6
Pittsburgh	0.0	0.0
Washington, D.C.	21.4	0.0
Atlanta	53.2	100.0
Chicago	44.1	60.3
Cleveland	42.2	0.0
Detroit	54.7	27.2
Minneapolis/St. Paul	0.0	0.0
St. Louis	72.0	0.0
Dallas	57.6	32.0
Houston	0.0	0.0
Los Angeles	42.1	28.0
San Francisco	49.9	0.0
Denver	0.0	0.0
Average	43.1%	[illegible].6%

$+\frac{Q187}{Q185} \times 100$; $\#\frac{Q190}{Q188} \times 100$.

APPENDICES

APPENDIX A

1983 SURVEY QUESTIONNAIRE

1983 Survey of Electronic Funds Transfer Transactions

Bank Administration Institute
AN OPERATIONS & TECHNOLOGY GROUP PROJECT

INSTRUCTIONS

- Please report all data for the period beginning Monday, November 14, 1983, and ending Sunday, November 20, 1983
- The Comments, Section X, should be completed at the end of the survey period.
- Since you may be unable to answer all questions, please respond with "N.A." if the question does not apply to your bank, or with a "zero" where appropriate.
- Please read all definitions before completing the survey.
- Mail the completed survey booklet to:

  1983 EFT Survey
  Bank Administration Institute
  60 Gould Center
  Rolling Meadows, Illinois 60008

- If you have any questions, please call Marjolijn van der Velde, at (312) 228-6200.

BANK ADMINISTRATION INSTITUTE

Survey of Electronic Funds Transfer Transactions

Date _____

Bank Name _____

Street Address _____

City _____ State _____ Zip _____

Name _____ Title _____
(of person to be contacted about survey date)

Phone _____

Name _____ Title _____
(of person to receive completed survey if different from above)

Please report all actual counts. *Do not round off.*

ACH TRANSACTIONS—any electronic funds transfer transactions processed through a local or regional automated clearinghouse, including any items you have processed for your own customers.

RETURNED ACH TRANSACTIONS:

Sent—any ACH transaction that you returned to the originator because you were unable to post to an account or for which no prenotification was on file.

Received—any ACH transaction that you originated, but which was returned to you by the ACH or the intended receiver.

ACH DEBIT TRANSACTIONS:

Insurance Premium, Home Mortgage—any ACH transaction sent or received by you for the payment of a consumer obligation.

Telephone Bill Payment—any ACH transaction sent or received by you as a result of a telephone bill payment program at a financial institution.

Corporate Payment—any ACH transaction sent or received by you that was originated by a corporation for the account of a corporation.

I. ACH TRANSACTIONS

QUESTION	Question Relationship	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SAT.—SUN.		WEEKLY TOTAL	
		Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received
1./2. Debits	—													1.	2.
3./4. Credits	—													3.	4.
5./6. Total ACH transactions	1+3=5 2+4=6													5.	6.

II. RETURNED ACH TRANSACTIONS

QUESTION	Question Relationship	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SAT.—SUN.		WEEKLY TOTAL	
		Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received
7./8. Debits returned	—													7.	8.
9./10. Credits returned	—													9.	10.
11./12. Total returned transactions	7+9=11 8+10=12													11.	12.

III. ACH DEBIT TRANSACTIONS

QUESTION	Question Relationship	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SAT.—SUN.		WEEKLY TOTAL	
		Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received
13./14. Insurance premium	—													13.	14.
15./16 Home mortgage	—													15.	16.
17./18. Telephone bill payment	—													17.	18.
19./20. Corporate payment—replacement for depository transfer	—													19.	20.
21./22. Other payments	—													21.	22.
23./24. Total ACH debit transactions	13+15+17+19+21=23 14+16+18+20+22=24													23.	24.

Are you participating in an interchange environment? (Circle one)

1. No **2.** Yes

If *no*, complete Table IV *only* and skip to Table VI.
If *yes*, complete Tables IV *and* V and continue to Table VI.

Please report all actual counts. Do *not* round off.

ATM TRANSACTIONS—PROPRIETARY—any transactions initiated at *your* bank's automated teller machine by *your* customers.

IV. ATM TRANSACTIONS—PROPRIETARY

QUESTION	Question Relationship	Monday	Tuesday	Wednesday	Thursday	Friday	Sat./Sun.	WEEKLY TOTAL
25. Total number of cash withdrawals from checking.								25.
26. Total number of cash withdrawals from savings.								26.
27. Total number of cash withdrawals from credit card.								27.
28. Total number of balance inquiries.								28.
29. Total number of transfers between checking, savings, and credit card accounts.								29.
30. Total number of checking deposits received.								30.
31. Total number of savings deposits received.								31.
32. Total number of bill payments.								32.
33. Total number of other ATM transactions.								33.
34. Total ATM transactions.	25+26+27+28+29+30+31+32+33=34							34.
35. Total dollar value of items in No. 25.		$	$	$	$	$	$	35. $
36. Total dollar value of items in No. 26.		$	$	$	$	$	$	36. $
37. Total dollar value of items in No. 27.		$	$	$	$	$	$	37. $
38. Total dollar value of items in No. 30.		$	$	$	$	$	$	38. $
39. Total dollar value of items in No. 31.		$	$	$	$	$	$	39. $
40. Total dollar value of items in No. 32.		$	$	$	$	$	$	40. $

Please report all actual counts. Do *not* round off.

ATM TRANSACTIONS—INTERCHANGE—any transactions initiated at *your* bank's automated teller machine by *another* financial institution's customer.

V. ATM TRANSACTIONS—INTERCHANGE

QUESTION	Question Relationship	Monday	Tuesday	Wednesday	Thursday	Friday	Sat./Sun.	WEEKLY TOTAL
41. Total number of cash withdrawals from checking.								41.
42. Total number of cash withdrawals from savings.								42.
43. Total number of cash withdrawals from credit card.								43.
44. Total number of balance inquiries.								44.
45. Total number of transfers between checking, savings, and credit card accounts.								45.
46. Total number of checking deposits received.								46.
47. Total number of savings deposits received.								47.
48. Total number of bill payments.								48.
49. Total number of other ATM transactions.								49.
50. Total ATM transactions.	41+42+43+44+45+46+47+48+49=50							50.
51. Total dollar value of items in No. 41.		$	$	$	$	$	$	51. $
52. Total dollar value of items in No. 42.		$	$	$	$	$	$	52. $
53. Total dollar value of items in No. 43.		$	$	$	$	$	$	53. $
54. Total dollar value of items in No. 46.		$	$	$	$	$	$	54. $
55. Total dollar value of items in No. 47.		$	$	$	$	$	$	55. $
56. Total dollar value of items in No. 48.		$	$	$	$	$	$	56. $

VI. ATM LOCATIONS

Please complete the following questions:		MAIN OFFICE				BRANCH OFFICES				OFF-PREMISE UNITS							TOTAL
		Lobby	Vestibule	Through the Wall	Drive-up	Lobby	Vestibule	Through the Wall	Drive-up	Free Standing	University/ College	Shopping Center	Grocery/ Retail Store	Office/ Corporate Complex	Hospital	Other	
How many automated teller machines/cash dispensers do you presently have in service?	Automated Teller Machine	57.	58.	59.	60.	61.	62.	63.	64.	65.	66.	67.	68.	69.	70.	71.	72.
	Cash Dispenser	73.	74.	75.	76.	77.	78.	79.	80.	81.	82.	83.	84.	85.	86.	87.	88.
How many automated teller machines/cash dispensers do you plan to install in the next 12 months?	Automated Teller Machine	89.	90.	91.	92.	93.	94.	95.	96.	97.	98.	99.	100.	101.	102.	103.	104.
	Cash Dispenser	105.	106.	107.	108.	109.	110.	111.	112.	113.	114.	115.	116.	117.	118.	119.	120.
What was the total volume of *proprietary* ATM transactions for all machines installed at each location during the test period, excluding balance inquiries?	Automated Teller Machine	121.	122.	123.	124.	125.	126.	127.	128.	129.	130.	131.	132.	133.	134.	135.	136.
	Cash Dispenser	137.	138.	139.	140.	141.	142.	143.	144.	145.	146.	147.	148.	149.	150.	151.	152.
What was the total volume of *interchange* ATM transactions for all machines at each location during the test period, excluding balance inquiries?	Automated Teller Machine	153.	154.	155.	156.	157.	158.	159.	160.	161.	162.	163.	164.	165.	166.	167.	168.
	Cash Dispenser	169.	170.	171.	172.	173.	174.	175.	176.	177.	178.	179.	180.	181.	182.	183.	184.

NOTE:

72=Sum of 57 through 71
88=Sum of 73 through 87
104=Sum of 89 through 103
120=Sum of 105 through 119
136=Sum of 121 through 135
152=Sum of 137 through 151
168=Sum of 153 through 167
184=Sum of 169 through 183

NUMBER OF CARDS OUTSTANDING—total number of cards issued since ATM program introduction with validated access capability.

HOUSEHOLD—a social unit comprised of those living together in the same dwelling.

NUMBER OF HOUSEHOLDS—total number of households that have at least one ATM access card outstanding.

NUMBER OF ACTIVE CARDS—total number of ATM access cards with a usage rate of at least once per month.

VII. ATM ACCESS CARDS

Type of ATM Access Card	Number of Cards Outstanding	Number of Households	Number of Active Cards
Proprietary ATM card	185.	186.	187.
Local/regional network ATM card	188.	189.	190.
National ATM card	191.	192.	193.
VISA debit card	194.	195.	196.
VISA credit card	197.	198.	199.
MasterCard debit card	200.	201.	202.
MasterCard credit card	203.	204.	205.
Other (please specify) _____ _____	206.	207.	208.
TOTALS	209.	210.	211.

NOTE:

209=Sum of 185 through 206
210=Sum of 186 through 207
211=Sum of 187 through 208

VIII. ATM SERVICE CHARGES

212. Does your bank levy a service charge on customers for using the ATM? (Circle one)

1. No
2. Yes

213. How is your service charge on ATM transactions structured? (Circle one)

1. Per transaction charge
2. Flat fee
3. Flat fee and per transaction charge
4. Other (please specify)_____

214. Is your service charge for ATM transactions _____ the service charge for DDA paper items? (Circle one)

1. Higher than
2. Lower than
3. The same as

IX. ON-LINE/OFF-LINE

215. Are your ATMs/cash dispensers currently (Circle one)

1. On-line?
2. Off-line?

X. COMMENTS

NOTE: The results of the past Electronic Funds Transfer Transactions Survey contained appendices devoted to commentary from the nation's EFT professionals. Please provide your comments so that we can continue this valuable forum. How have conditions changed from last year? Attach a separate sheet if you need more space.

ACH settlement

ACH prenotifications

ACH return items

ATM settlement

ATM vandalism

ATM availability

ATM fraud/losses

ATM security

Regulation E

Additional comments

APPENDIX B

EFT GEOGRAPHIC AREAS

Figure B-1
EFT Geographic Areas

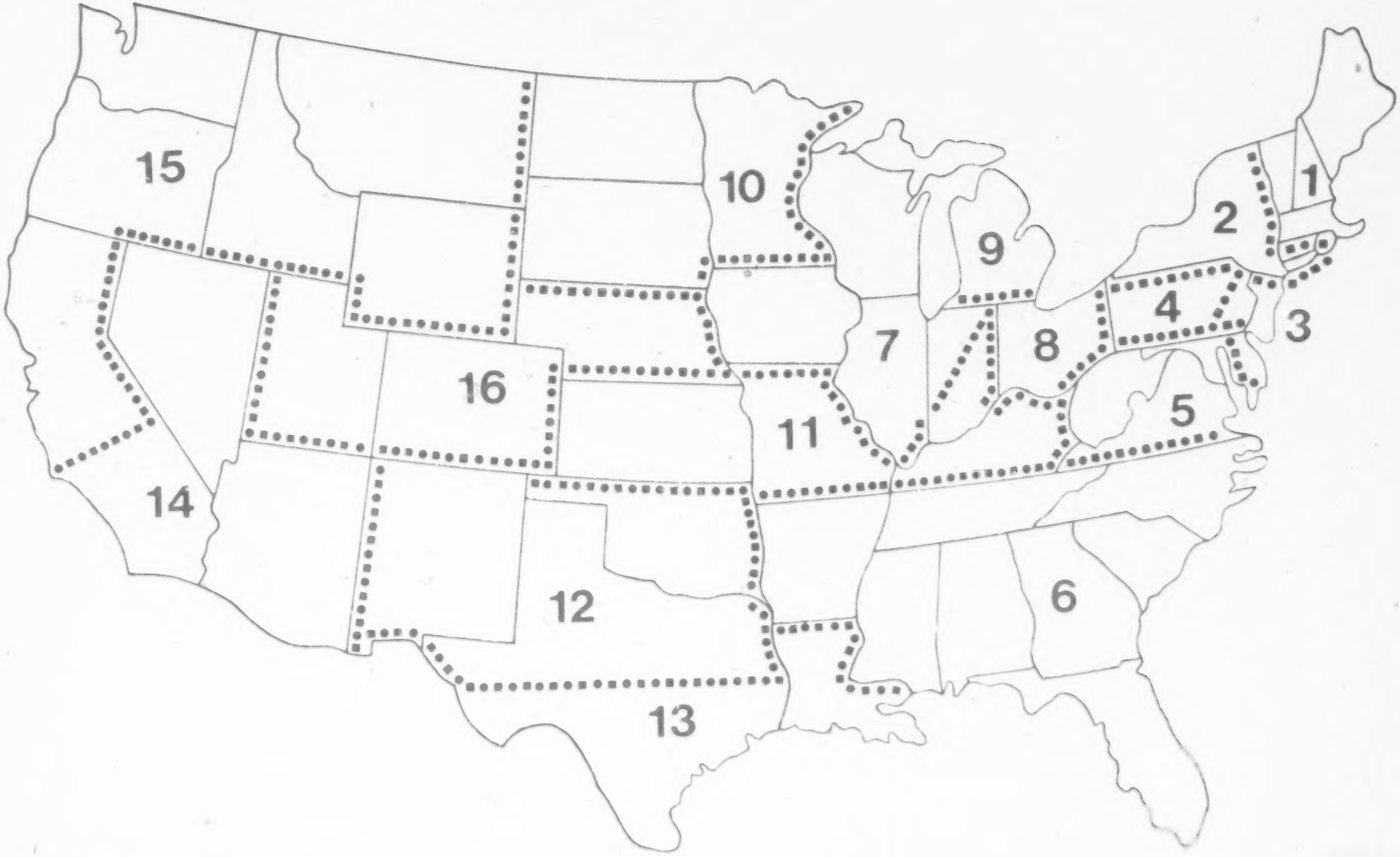

Table B-1
Survey Respondents by Geographic Area

AREA*	ADL Survey Banks 1980	1981	1982	1983	All Reporting Banks+ 1980	1981	1982	1983
Boston	3	2	2	0	12	10	9	5
New York	4	4	4	2	17	14	17	13
Philadelphia	2	3	2	2	24	18	15	12
Pittsburgh	3	3	2	3	5	5	4	5
Washington, D.C.	1	2	1	1	9	9	8	6
Atlanta	1	2	3	2	21	18	23	13
Chicago	5	3	5	3	11	12	11	8
Cleveland	3	3	3	3	11	13	12	7
Detroit	2	1	2	1	9	9	9	5
Minneapolis/St. Paul	0	1	1	1	0	5	4	1
St. Louis	3	1	2	1	11	10	10	6
Dallas	3	2	2	2	6	7	5	4
Houston	2	2	1	1	8	5	7	2
Los Angeles	1	0	1	0	10	7	11	8
San Francisco	1	2	3	1	11	9	10	8
Denver	2	2	1	0	5	6	6	4
Total banks	36	33	35	23	170	157	161	107

*The Outlook for the Nation's Check Payment System: 1970-1980, Arthur D. Little, Inc., Cambridge, Massachusetts, December, 1970.

+The non-ADL banks are not necessarily located in the cities surveyed by ADL. For the sake of consistency, however, their data are included in a regional area that has as its center the city studied in this survey. All reporting banks include the data from the ADL banks.

APPENDIX C

PROBLEMS REPORTED BY BANKERS

The following comments were submitted by bankers who participated in the Institute's 1983 EFT survey. The purpose of this section is to inform bankers about overall problems in the ACH and the ATM payments systems. References to specific organizations, vendors, or pieces of equipment are omitted.

ACH: Settlement

"The actual mechanics of ACH settlement remain basically the same as last year."

"Settlement has remained the same with the exception of volume, which has increased."

"Local ACH files are settled through the private sector ACH operator in Hawaii."

"Appears to be working well at the present time."

"ACH settlement reports show settlement totals but do not show the batch totals. This causes problems in reconciling the ACH Settlement Report."

ACH: Prenotifications

"Prenotes are still not being acted upon by many receiving banks."

"Federal Reserve software should be the same nationwide to accept prenotes no matter what settlement dates appears on the prenote entries."

"The financial institutions have recognized the importance of prenotes, resulting in timely responses and a reduction in problems."

"Most institutions don't return prenotifications with bad account data. Instituting a significant return item charge (excluding prenotes) to the receiving institution would help solve this problem."

"Prenotes are not taken seriously enough by most organizations."

"Timeliness of the return of prenote advices remains a problem."

"The local ACH operator in Hawaii is preparing to offer a conversion service."

"Receipt of debit prenotes for share draft items that have the bank routing number instead of the credit union routing number is causing an additional amount of paperwork."

"Originating banks are paying more attention to prenotes."

"Many financial institutions do not initiate prenotes and/or acknowledge incorrect prenotes."

"Some institutions are not returning prenotes in time to correct bad data before sending out money."

"We have experienced a number of situations when prenotes were ignored by the receiving institution. Thus an originator doesn't know an entry is "bad" until a live item has been rejected by the receiver."

ACH: Return Items

"Actual return item volume increased 65% in one year with approximately the same base."

"Prompt return of items via transmission to NYACH at a reduced cost has eliminated manual reprocessing of items to customer accounts (primarily NSF)."

"Paper returns are extremely slow in coming back through the system."

"We are evaluating the use of an automated return module for expediting the return of transactions to the originating point."

"Untimely returns continue to be a major problem."

"Code 99 is being abused by many institutions."

"Return items continue to be a major problem."

"The biggest problem is getting the items returned. Automation of this process would be beneficial."

"As of July 1983, our returns are automated and our work is easier."

"The latest Fed proposals do nothing to encourage automating the returns process."

"We have automated 85% of our return items, including Federal recurring payments. This has saved us time in processing and settlement."

ACH: Miscellaneous

"The fifth district has been adversely affected by a unilateral change in Federal Reserve processing windows. We previously enjoyed a 10:00 p.m. - midnight window, but have moved to a 6:00 - 9:00 p.m. window for all ACH items. This change does not enhance the attractiveness of ACH for our customers."

"We are entering into a direct ACH exchange with other local banks and are considering other private sector alternatives."

ATM: Settlement

"Network settlement is too time-consuming and member banks do not adhere to network operating procedures."

"Network adjustments take too long to settle."

"We do not have problems with time settlement."

"Settlement of each terminal takes approximately 15 minutes a day."

"We are centrally balancing all remote ATMs."

"Settlement has improved due to a conversion to card-automated balancing procedures. Our ATM network no longer needs to be closed for an hour a day."

ATM: Vandalism

"Vandalism problems have been minimal."

"Minimal — mostly to phones — approximately 15 occurrences."

"No significant increase in vandalism during 1983."

"We have had four keyboards destroyed in the last three months."

"There has been some increase since 1982."

"No vandalism in the last five months."

"Vandalism has increased, forcing us to improve our surveillance systems by upgrading our still-frame cameras to continuous shot video cameras."

ATM: Availability

"Availability is averaging 99.1%."

Availability is 96% overall, an increase of 3% since 1982."

"The downtime has decreased slightly primarily because of software development and testing being performed on an in-house "test" ATM installed early in 1983."

"ATM availability has increased during the past year because of better computer processing."

"Significant problems are experienced when the networks processor is not available."

"Availability is averaging 98% system wide."

"Because of the veteran staff's involvement and the refined response team procedures, ATM availability is 97%."

ATM: Fraud/Losses

"Institutions that cannot provide a photo of the card user should be held liable for customer-disputed transactions."

"Fraud/losses are down 50% from last year."

"Most losses occur because of fraudulent use of lost/stolen cards."

"ATM fraud is minimal."

"Charge-offs due to fraud continue to grow in proportion to the number of cards issued."

"Fraud/losses remain the same as last year."

"In order to decrease fraud/losses, our bank made the decision to go on-line."

"Fraud/losses have increased because of the public's familiarity with surveillance systems and ATM operations."

"Customer negligence in PIN disclosure contributes to the amount of fraud/losses."

ATM: Security

"We are planning a "test pilot" environment involving security cameras and/or CCTV."

"Cameras are installed at all locations. Security is of utmost concern."

"We have recently installed three cameras."

"We do not use surveillance cameras at our ATMs."

"Robberies increased at selected ATMs."

"We have installed a new prototype "panic" button."

"Internal security and site security are constantly upgraded through new equipment and communication devices."

Regulation E

"There is continued difficulty in completing many investigations within 10 days, particularly when customer is unavailable for an interview with investigators."

"The number of EFT error reports rocessed increased by 17% over last year, while the ATM network increased by over 100%."

"From a compliance standpoint, the situation remains unchanged. Based on the number of "alleged errors" and notifications of "unauthorized" transfers standpoint, we have experienced an increase in the number of cases researched."

"Reg E needs to be amended to provide customer liability for losses occurring from customer negligence."